CLARIANT

Sustainability Report 2012

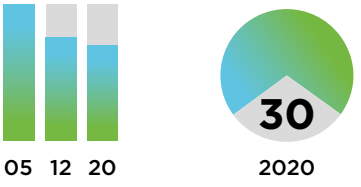
what is precious to you?

PRECISE

ENVIRONMENTAL GOALS FOR 2020*

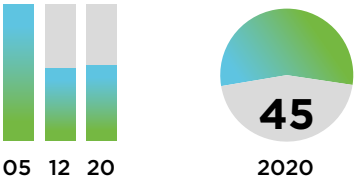
Based on reference values for 2005, Clariant has defined precise environmental goals for 2020. The potential reductions that the company is aiming to achieve, represent obligatory benchmarks for all activities within the Clariant Group.

Reduce energy consumption by 30 %



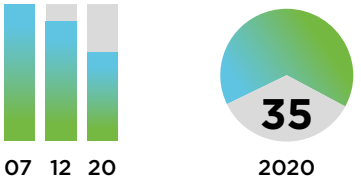
1 January 2005:	1711 kWh/t
2020 target:	– 30 %
Achieved until 2012:	– 24 %

Reduce direct CO_2 emissions by 45 %



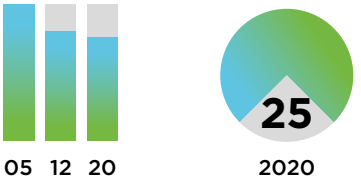
1 January 2005:	236 kg/t
2020 target:	– 45 %
Achieved until 2012:	– 47 %

Reduce direct and indirect greenhouse gas emissions by 35 %



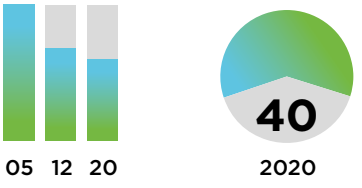
1 January 2007:	541 kg CO_2-Äqu./t
2020 target:	– 35 %
Achieved until 2012:	– 12 %

Reduce water consumption by 25 %



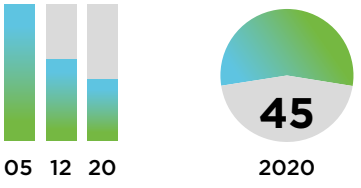
1 January 2005:	42 m^3/t
2020 target:	– 25 %
Achieved until 2012:	– 20 %

Reduce waste water by 40 %



1 January 2005:	11,5 m^3/t
2020 target:	– 40 %
Achieved until 2012:	– 32 %

Reduce waste by 45 %



1 January 2005:	111 kg/t
2020 target:	– 45 %
Achieved until 2012:	– 40 %

* The environmental goals don't yet include effects of the former businesses of Süd-Chemie, acquired in 2011.

L'important pour moi est d'avoir une famille heureuse, de me sentir bien dans mon travail et de pouvoir aider les autres.

Dass ich im Job gefordert werde, dass ich aber auch eine gewisse Entscheidungsfreiheit habe und dass ich nach dem Feierabend den Rhein nebendran habe fürs Hobby – das Fischen.

与几乎所有中国人一样，对我来说最重要的也是我的家庭。其次是责任，包括我的工作。第三是宽容。我希望以宽容和善良的态度对待所有人。

Menschlichkeit. Ich möchte, dass es den Menschen, die mich umgeben, gut geht.

கடவுள் என்னை உருவாக்கியுள்ளார். நான் ஒரு விபத்து அல்ல. என் வாழ்க்கையில் ஒரு திட்டத்தையும், அதே போல ஒரு காரணத்தையும், கடவுள் வைத்திருப்பார். என்னைப் பொறுத்தவரை இரண்டு விஷயங்கள் எனக்கு மிகவும் மதிப்பிற்குரியவை. ஒன்று குடும்பம் மற்றொன்று தொழில் ஆகும்.

Arbeiten in einem angenehmen Umfeld. Und das tue ich auch bei meinem Hobby: Ich singe in einem gemischten Chor mit rund hundert Mitsängern.

Kreative Ideen. Und vor allem auch die Leute, die diese Ideen haben, für sie leben, mit Leidenschaft daran arbeiten und sie mit anderen teilen. So entsteht Neues und so entsteht auch Veränderung im Leben wie auch bei der Arbeit.

Me gusta pasar tiempo con mi familia los fines de semana, y viajar, porque esos son los valores que me transmitieron mis padres desde niña: respetar a mis hermanos y respetar a los demás.

વિકાસ: આધ્યાત્મિક, બૌદ્ધિક, બધા ક્ષેત્ર માં સતત વિકાસ

En mi caso, lo más importante es la lealtad. Creo que aúna todas las ideas que considero importantes, como la honestidad, la confianza y la compasión por los demás, sobre todo porque conducen al sentido de familia, que creo que es lo más valioso. Para mí.

Ehrlichkeit, Zusammenarbeit, Gesundheit und Umweltschutz.

Gegenseitiger Respekt. Dazu gehört auch, den Planeten für folgende Generationen lebenswert zu erhalten.

Keeping in touch with all my friends and family. I'm British, I've been living in Switzerland for over eight years now, and I think it's very easy to lose contact with people if you're not in regular contact. So that's precious to me – just maintaining contact, talking, meeting up with them as regularly as I can.

Dass ich gesund bleibe, keine Krankheiten habe und Sport treiben kann, auch noch im hohen Alter. Das ist mein Lebensmotto.

Respekt und Akzeptanz. Dass man sich wirklich nur auf die Person konzentriert und nicht zum Beispiel auf die Herkunft oder das Alter.

对我来说，最宝贵的不是我所拥有的财物，而是我周围的人：我的家庭和我的同事。

زمینس پیٹھ تلیو
خوبصورت
زندگی ہند مزء۔

Wenn du lächelst, lächelt die ganze Welt mit dir.

我最珍爱的是我的家庭。其他任何事情都位居其后。

Für mich ist es wichtig, durch meine positive Art andere Menschen anzustecken.

A fé me dá forças para acreditar. A família é a âncora que nos dá estabilidade. E o trabalho é o suporte que assegura a força ao homem.

O meu bem estar, o bem estar da minha família e o dos meus amigos e colegas de trabalho.

Ganz wichtig für mich in meinem Leben ist meine Freiheit. Ich möchte gerne, dass die Menschen mich verstehen und mich warnehmen – als Person und nicht aufgrund meiner Herkunft.

我的家庭、我的事业、我的工作团队，以及我的所有生活经验。

Statements from Clariant employees collected during the campaign 'what's precious to you?' in spring 2012.

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SUSTAINABILITY REPORT 2012

*Global Reporting Initiative™ see page 129

Foreword

Dear Readers,

This is the third independent sustainability report in a row, informing you of our new strategic priorities and main issues, with their implications on sustainability at Clariant over the short and medium term. You will also notice how our new, self-confident visuals testify to our unified global corporate culture.

The introduction of a new brand and value system throughout the entire enterprise has been a key event this year, with extreme significance for both ongoing business trends and the social, environmental and economic aspects of sustainability which are becoming increasingly important.

Clariant has set clear, qualitative sustainability goals to match our strategic alignment, such as further increasing our system safety, improving our products through continuous research, running steadily more efficient programs for employee qualification and stepping up communication with our stakeholders. Our environmental goals, such as steadily decreasing the specific consumption of water and power and reducing waste and pollution, have a long-term perspective through the year 2020.

As we do business, we focus on more than simply complying with legal regulations; we also participate in various voluntary sustainability programs – including the duties imposed by the Responsible Care® Global Charter and the Global Product Strategy. Moreover, we have launched a few such programs of our own to guide our actions, including the comprehensive Code of Conduct, as well as the Code of Conduct for Suppliers.

In December 2012 the company instituted the Clariant Employment Policy, which applies to the entire global organization. These guidelines set down the ethical and social standards that apply to our employees around the world. We have put particular emphasis on employee-related activities such as the program we launched in April 2012 to promote more family-friendly employment models.

Our internal Sustainability Council, which was founded in 2011, and which I was appointed chairman of in 2012, has received plenty of new momentum. Together, we are developing medium- and long-term sustainability goals and standards, evaluating the global challenges our company faces, and deciding on specific activities in response to important sustainability issues; these activities are then implemented under the Sustainability@Clariant program.

Comprehensive product stewardship is the indispensible prerequisite for successful business dealings. It is the only way to minimize risks and optimize business opportunities. This is the reason why I was happy to accept in the fall of 2012 the job as Chairman of the Product Stewardship Program Council at the European Chemical Industry Council (Cefic).

Clariant has many plans to step up dialog with its stakeholders even further. At the end of 2012, we used the occasion of a broad survey to strike up intense dialog with a number of relevant stakeholders. This survey was only one part of an ongoing program designed to make Clariant more sustainable over the course of several years.

This report will help us to stay in dialog with you, so that we can continue to bring the company in line with the criteria of sustainability. The fact is that only the companies that manage to do business in a sustainable manner and act responsibly, will be successful over the long term.

Hariolf Kottmann
Chief Executive Officer

—
HARIOLF KOTTMANN
Chief Executive Officer

Strategy, **MANAGEMENT AND GOALS**

Sustainability is not a recent invention, but was first coined in 1713 by a chief mining administrator for the Saxon court in Freiberg, Germany.

I. What is sustainability?

Sustainability is not a recent invention. It can be traced back hundreds of years. The term »sustainability« (or rather »Nachhaltigkeit« in German) originated in forestry and was first coined by Hans Carl von Carlowitz, chief mining administrator for the Saxon court in Freiberg, in his book »Sylvicultura Oeconomica«, published in 1713. The publication came in response to the advancing deforestation taking place at that time. Von Carlowitz's goal was for only as much timber to be felled as could be replaced through planned reforestation using seeds and plants. At that time, a forester was considered to be engaging in sustainable forestry if, after 30 years, he was able to leave the forested area in exactly the same condition as it was found in.

During the course of the 19th century, the concept of sustainability infiltrated economic life as a whole. In the wake of numerous UN conferences, the term »sustainable development« became widely used. In 1987 the Brundtland Commission, a UN Commission on environment and development chaired by the former Norwegian prime minister Gro Harlem Brundtland, defined sustainable development in its report »Our Common Future« as »development that meets the needs of the present without compromising the ability of future generations to meet their own needs«. Essentially, sustainable development is the process of change in which the use of resources, the goal of investment, the direction of technological development and institutional change are not only in sync with each other, but increase current and future potential to meet people's needs and desires.

Increasing living standards for all, security of resources including for future generations, a clean and livable environment – all of these are worth pursuing, but they don't come automatically and without a price. To achieve a high quality of life in a healthy environment, rigorous sustainable management is required. Clariant understands this to mean, in particular:

- treating nature and the environment with care,
- using resources extremely efficiently and responsibly,
- ensuring maximum safety of plants, processes and products,
- protecting people from avoidable risks, and
- motivating and inspiring employees.

Clariant does not want to simply improve when it comes to important issues of sustainability, but rather has set itself challenging objectives which – as independently of economic and business development as possible – are not only achievable, they could also serve as a benchmark for the industry. This is particularly meaningful for important criteria that can be measured using exact figures, such as energy consumption, water use or the amount of waste produced. Clariant does not only seek to reduce significantly the relevant absolute volumes, but defines sustainability targets in relative terms. Improvement is sought after independently of production volumes, i. e. in terms of savings per tonne. Over the coming years, Clariant will strive to make its production processes ever more efficient and sustainable (see also »2020 targets« on page 11).

II. Clariant's sustainability strategy

A great degree of importance is placed on sustainability in Clariant's corporate strategy. As a leading company in the field of specialty chemicals, Clariant does not limit itself to simply complying with the legal requirements, but also takes part in a variety of voluntary sustainability programs, including voluntary commitments as part of the Global Responsible Care® Charter and the Global Product Strategy, as well as self-initiated commitments such as the Code of Conduct and the Code of Conduct for Suppliers (see also pages 9 – 10).

In all of its activities, Clariant puts an emphasis on environmental protection and safety. The company's own regulations on environment, health and safety are in line with the objectives of the global Charter. In addition, Clariant has ISO 9001, ISO 14001 and OHSAS 18001 certification worldwide and is also gradually achieving ISO 50001 certification. Each production facility must adhere vigorously to the company's global guidelines for environmentally compatible and safe business operations. Moreover, Clariant has a global system for event reporting and emergency management in place.

BASIS FOR SUSTAINABLE GROWTH

Following the successful conclusion of the restructuring phase, Clariant has set the strategic path for sustainable and profitable growth. A basic prerequisite for this is the conversion of the company into a single unit which is managed on value-based performance principles in order to achieve attractive and lasting returns for all customers, employees and shareholders.

FOUR PILLARS FOR SUCCESS

Future profitable growth based on four strategic pillars:

1. **Continuous improvement of profitability in all Business Units**
   Target: Improve EBITDA Margin of the current company portfolio by 1 – 2 percentage points, through targeted performance management and the continuous improvement program Clariant Excellence.
2. **Focus on research & development and innovation**
   Target: Improve innovation success rate and generate additional sales growth of 1 – 2 percentage points by launching innovative products.
3. **Expansion of Clariant's competitive position in global growth markets**
   Target: Increase market share in the emerging countries of China, India and Brazil by establishing and taking advantage of the dynamic growth in these markets.
4. **Optimization of the company portfolio**
   Target: Active portfolio management to expand the Group's presence in markets with above-average profitability.

Profitability has improved significantly over the past five years. This success is not an excuse for Clariant to rest on its laurels. The goal is to improve the EBITDA margin (earnings before interest, taxes, depreciation and amortization divided by total revenue) to more than 17 % by 2015. In addition, a return on invested capital (ROIC), that is higher than the average in the company's peer* group, is to be achieved. Over the short term, this is to be accomplished mainly by an even more intensive focus on Business Units with above-average growth in sales and results.

* Contains companies such as: Altana, Akzo Nobel, Albemarle, Arkema, BASF, Celanese, Chemtura, Clariant, Croda, Cytec, Dow Chemicals, DSM, Ecolab, Evonik, Huntsman, Kemira, Lanxess, PolyOne, Rockwood, Solvay, Wacker

Implementing the strategic targets will have a lasting influence on Clariant's corporate structure and will drive changes going forward. During 2012, Clariant's innovative and customized products and solutions were produced by 11 Business Units.

At the end of the year, Clariant has been able to report initial transactions more quickly than expected with the sale of Emulsions, Paper Specialties and Textile Chemicals. The remaining options are planned to be implemented by the end of 2013.

At the same time, Clariant is seeking to improve continuously not only in economic terms, but also in terms of environmental sustainability. A number of measures have been initiated to achieve this, a representative sample of which are presented in this report. Clariant is also setting standards in employee support and development in order to attract talented, motivated and capable employees.

III. Sustainability management at Clariant

In order to successfully implement its sustainability strategy, Clariant has developed an efficient management system that forms part of Group-wide process and corporate planning. It involves ongoing checks of compliance with guidelines and actual business development. All employees are responsible for the functioning of this system, depending on their role, position and qualifications. At the same time, Clariant has linked incentives to this system. For example, employee bonuses are partially linked to specific objectives in the area of sustainability.

The guidelines on product and production safety represent a key component of the management system. These aim to minimize the effects of business activities on the environment, health and safety. Protecting people and the environment is of first priority in all activities. This is reflected in the comprehensive catalogue of rules and measures within the management system as well as Group-wide risk identification. Employee training is carried out regularly and processes, procedures and measures are continuously monitored through internal and external reviews. In addition to this, Clariant has committed itself to support voluntary programs such as the Global Product Strategy.

All Clariant facilities worldwide are assessed for possible risks and optimization opportunities. The results of these assessments are included in Group-wide risk management, analyzed according to urgency and relevance and then handled appropriately. In addition, through its effective emergency management system, which includes a comprehensive catalogue of measures, Clariant is able to react to loss events without delay and in a highly efficient manner.

CLOSE COLLABORATION WITH SUPPLIERS AND CUSTOMERS

Relevant criteria also form part of Clariant's business relationships. Suppliers, outsourcing partners and service providers are reviewed on the basis of spot checks. Within procurement management, partners are carefully selected based not only on economic criteria, but also on purchasing and production procedures as well as delivery channels and systems, from a sustainability perspective. Clariant works together with its customers to improve the whole process chain.

Optimizing the procurement chain reduces the impact on the environment.

With sustainable production in mind, Clariant also has strict guidelines in place for procurement. Clariant's sustainability standards are thus incorporated into its purchasing strategies, procurement policies, and general guidelines:

- rigorous energy management with continuous development and optimization;
- an increase in the share of renewable raw materials;
- active waste management in all of Clariant's production locations – the choice of waste disposal company also forms part of Clariant's sustainability approach within the area of procurement; and
- the development of innovative projects in collaboration with selected suppliers.

Clariant's suppliers are an important part of Clariant's global network. This is also covered by the new Code of Conduct for Suppliers. This has been established within the new Code of Conduct for Suppliers. For more details please see pages 9 – 10.

RISK IDENTIFICATION AND RISK MANAGEMENT

As part of its corporate risk management, Clariant assigns risk levels and promotes entrepreneurial thinking within the Group. In the course of this process, opportunities and risks are assessed, taking into account the short and medium-term objectives set by the Board of Directors. Within risk management, these assessments are reviewed in terms of relevance, consistency, and accuracy in order to facilitate decisions regarding possible optimization measures. Risk assessment takes place on an annual basis and is complemented by quarterly updates and interim reports where necessary. In addition, it is ensured that all significant risks are communicated to the Executive Committee and the Board of Directors. Risk management also involves informing, training, and motivating employees.

If necessary, Clariant's risk management system allows for the speedy development of countermeasures and the allocation of responsibilities. The related regulations are based on the Institute of Risk Management's standard and are in line with the Committee of Sponsoring Organizations of the Treadway Commission's »Enterprise Risk Management – Integrated Framework«. The results of the risk assessments are consolidated and then the risks are evaluated by the Executive Committee and the Board of Directors. See also Annual Report 2012, pages 126 – 127.

MONITORING RISKS TO THE ENVIRONMENT

Clariant observes and analyzes all areas that could affect the environment and the efficient use of resources. These include:

- consuming raw materials in relation to each product being manufactured,
- handling dangerous materials,
- consuming energy and water,
- wastewater management,
- emissions of air,
- removing waste,
- noise pollution and contamination,
- accidents, events and complaints from nearby residents, and
- the potential environmental aspects of activities being planned.

Many Clariant sites have a long and often very varied chemical history. The way Clariant handled and transported chemicals in the past led in some cases to the soil and groundwater being polluted. Clariant is investigating these damaged sites and drawing up plans to clean them up and make them safe. We discuss the appropriate steps and implement them in conjunction with the local authorities in the respective countries. The Group's EHS organization together with renowned experts ensure that the experience gained to date becomes part of an efficient strategy for the future and that Clariant complies with international standards. Contractual agreements govern any obligations arising from contamination related to acquisitions or disposals.

The significance of security measures has risen substantially since the increase in terrorist attacks around the world in recent years. Clariant is reacting to this by raising the steps it takes to protect its property. Accordingly none of the sites can be accessed except through specifically designated entry points. Entry is itself – as was frequently the case in the past – only possible after stringent controls. Independently of these controls, there is a standardized concept to protect all Clariant sites that is agreed with those responsible for operating them. This ensures that similar effective measures are applied at all sites and that only those authorized to gain access to a site and to Clariant's operations are allowed in.

IV. Clariant's Sustainability Council

Clariant is committed to acting ethically and sustainably in all of its business activities. Sustainability is an integral part of its business strategy. The Sustainability Council was created in order to be able to assess and manage all sustainability efforts centrally and across all company levels with the greatest efficiency and effect possible.

This Council involves all Business Units in order to promote the sustainable development of business activities in line with the holistic approach of Clariant's sustainability policy. The Council evaluates global challenges and megatrends, sets the company's medium and long-term objectives, and initiates sustainability projects and activities accordingly. The Council appoints ad hoc and permanent working groups for special projects that form part of Clariant's sustainability activities. Additional tasks of the Council include approving project strategies developed by various working groups and monitoring the progress of the projects initiated, as well as evaluating and reviewing the Group-wide guidelines and standards related to »Sustainability@Clariant«.

The Council is chaired by the Chief Executive Officer (CEO). The Group Sustainability Manager within Corporate Sustainability and Regulatory Affairs (CS&RA) acts as the secretary and coordinator. The Chairman ensures that all relevant strategic sustainability initiatives and activities are in line with Clariant's corporate governance units. The Council is made up of management of the following areas: Catalysis & Energy (as of 1 January 2013 renamed: Catalysts), Industrial & Consumer Specialties, Company Affairs & Regions, Corporate Planning and Strategy, Corporate Human Resources, Corporate Legal, Corporate Sustainability & Regulatory Affairs, Group Communications & Investor Relations, Group Logistics, Group Procurement, and Group Technology Services.

V. Clariant's guidelines on sustainability issues

Clariant is committed to acting ethically and sustainably in all its business activities, in accordance with the Responsible Care® principles and Clariant's own Code of Conduct. Clariant strives for a business culture of continuous improvement, sustainable competitiveness, and top performance in line with Clariant's ethical standards.

RESPONSIBLE CARE® GLOBAL CHARTER

Clariant has signed the Responsible Care® Global Charter, which was developed by the International Council of Chemical Associations (ICAA). Compliance with this Charter is monitored. It is a voluntary commitment by the chemical industry worldwide to pursue continual improvement in the fields of environment, health, and safety. By the end of 2011, 159 companies had signed this Charter.

The key components of the Responsible Care® Global Charter for companies are:

- adoption of the international Responsible Care® principles;
- implementation of the key points of the national Responsible Care® programs;
- commitment to promoting sustainable development;
- continual improvement of the company's performance in this regard and reporting thereon;
- improvement of chemical products worldwide in terms of product responsibility;
- commitment to increasing acceptance of the Charter within the chemical industry;
- active support of national and local Responsible Care monitoring processes;
- identification of interest groups' expectations of the chemical industry; and
- allocation of sufficient resources to effectively implement Responsible Care.

CODE OF CONDUCT

The Code of Conduct is binding for all Clariant employees and must be applied to business conduct in order to protect the company's reputation and to minimize risk for shareholders. The Code regulates the fields of fair competition, freedom of association, the right to collective bargaining, corruption, discrimination, and child and forced labor. The Code aims to prevent:

- conflicts of interest;
- bribes;
- insider trading;
- antitrust violations;
- money laundering;
- accounting fraud;
- disclosure of confidential information;
- abuse of company resources for private interests;
- environmental hazards;
- discrimination or sexual harassment.

Clariant accepts ethical responsibility for sustainable, economic, ecological, and fair business practices. Corporate social responsibility is an integral component of the company's philosophy. All Clariant employees are educated and trained to assume responsibility in line with their function, level of authority, and qualifications.

CODE OF CONDUCT FOR SUPPLIERS

When procuring raw materials, intermediate products, or other goods and services, Clariant employees are obligated to apply the same legal, ethical, and moral standards in the selection of suppliers as Clariant imposes upon itself. Since 2012 these standards have formed the basis of a specific code of conduct for procurement. Clariant expects its suppliers and contractual partners to abide by this code of conduct and to support efforts to keep any adverse consequences arising from business activities to an absolute minimum. Clariant employees will monitor the behavior of business partners and record any violations of the code of conduct. In the event that a business partner does not abide by or respect the regulations, Clariant will terminate the contractual relationship with that partner.

Key aspects of the Code of Conduct for Suppliers are:

Human rights, i. e., the health and safety of the employees of business partners (adherence to strict guidelines on workplace safety and to the International Labor Organization's international standards on occupational health and safety); anti-discrimination, i. e., the prohibition of discrimination (on the grounds of race, social background, ethnicity, nationality, age, religion, gender, sexual orientation, political opinions, or disability); forced labor and child labor (adherence to ILO conventions 138 and 182); freedom of association and the right to collective bargaining (the right to strike and trade union membership); and fair remuneration policies (adherence to the relevant legislation on working time, salaries, and overtime pay).

Environment, i. e., adherence to safety standards (protection of nature and people, particularly local residents); product responsibility (monitoring of the effects of manufactured goods and services during development, production, distribution, consumption, and disposal); resource efficiency and climate protection (minimization of waste and emissions into air, soil and water, use of energy-efficient and environmentally compatible technologies); and continual improvement in all of these areas.

Competition and business relationships, i. e., law-abiding behavior (full compliance with international, national and local legislation), fair competition (adherence to commercial and competition law as well as adequate monitoring and rejection of bribery and other unfair advantages), avoidance of conflicts of interests, confidentiality (data protection and information security), and transparent financial reporting as well as accurate bookkeeping and rejection of money laundering.

ISO STANDARDS

Clariant's certified management system takes into account all internal and external standards applicable to Clariant. It provides the company with a documented structural framework on which to build targets and programs. The system complies with ISO 9001, ISO 14001, OHSAS 18001, ISO 50001 and Responsible Care®. For Clariant, corporate sustainability means achieving and maintaining a high level of quality in sustainability-related measures, social responsibility and Responsible Care across all areas of the business.

EXTENSIVE VOLUNTARY COMMITMENTS

Compliance with laws, international standards, internal regulations, and Clariant's Code of Conduct is a basic requirement for all activities. Clariant welcomes voluntary initiatives and provides suitable support to develop effective and efficient safety, health, and environmental regulations. In its worldwide activities, one of Clariant's most important objectives is safety and the protection of people and the environment. Clariant continuously monitors that this objective is being followed and that all safety aspects related to its activities are reviewed. A comprehensive risk assessment of operations and products is a prerequisite for all business processes. Local and global emergency organizational structures are in place to ensure comprehensive emergency management.

Clariant is convinced that understanding the customers' needs is crucial for success. Innovation and customer focus is key to this. Clariant is constantly developing new and improved products and services to add value for its customers and the environment. At the same time, Clariant makes sure that employees, customers, the general public, and the environment can rely on the safety of its products throughout the entire product lifecycle.

CLARIANT ACADEMY LAUNCHED IN 2013
Clariant is setting out to establish and sustain a high performance culture which reflects our vision of becoming the world's leading specialty chemicals company. In order to drive the company forward into the future, we rely on well-trained and highly motivated employees.

The Academy learning programs will start in 2013 and focus on four learning areas: Leadership, General Management, Functional Excellence and Change Management. The programs aim to further develop the personal and professional skills of our employees. They enable individuals to make the most of their talent, their personality and their potential – for their own benefit and for the benefit of Clariant.

Clariant implements measures to avoid waste and minimize the environmental, safety, and health risks that may arise during the production, storage, distribution, and use of its products. This includes the efficient use of energy and raw materials and the continuous improvement of processes to minimize the impact of Clariant's activities on the environment.

One of Clariant's key sustainability targets is also to develop mutually beneficial partnerships with external suppliers and contractual partners in order to provide support to business areas based on the established safety and sustainability standards. These standards also cover corporate social responsibility and Responsible Care®. Suppliers and service providers are encouraged to implement their own standards that are comparable to Clariant's guidelines.

FAMILY POLICY
In April 2012, Clariant initiated a program to promote more family-friendly job opportunities. As part of this program, all mothers are guaranteed a comparable position upon their return to work up to one year following the birth or adoption of a child. For the two years following the birth or adoption, Clariant grants mothers ten days of paid leave for family purposes, in addition to their standard annual leave. Fathers are also entitled to the same benefit after the birth of their child. It will only be possible to carry out a meaningful assessment of the use of parental leave by men and women at Clariant as of the 2013 reporting year (see also »Demography Project« on page 52).

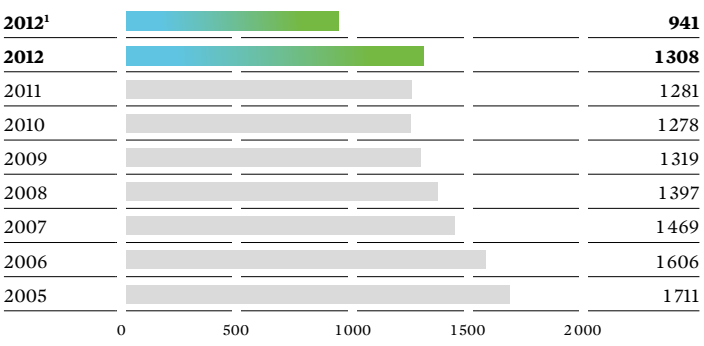
VI. Clariant's environmental targets for 2020

Clariant sees considerable potential for savings relating to important environmental parameters from the optimization of complex processes. Clariant's objectives for 2020 therefore include relevant indicators for which there are sufficient and detailed data from across all areas of the company extending back over a long period of time. Where this is the case, it is possible to make reliable and comprehensive forecasts and plans. Compared with the figures for 2005 – or for 2007 in the case of total greenhouse gases since it took two years to fully establish the total volume – Clariant is seeking to achieve a percentage improvement in key indicators that measures well into double figures by the year 2020. In order to define these targets, it was necessary to develop comprehensive scenarios regarding how production would develop, what the future product portfolio might look like, what innovations would be likely, and what investments would be needed.

With these environmental targets, which were formulated in 2011, the company wishes to make a contribution to the world's great challenges and megatrends: environmental protection, energy efficiency, and conservation of resources. Solutions and savings potential are constantly sought after, even beyond the defined targets. This process spans the entire Group and involves all areas. Clariant's innovation potential will make a key contribution in this regard.

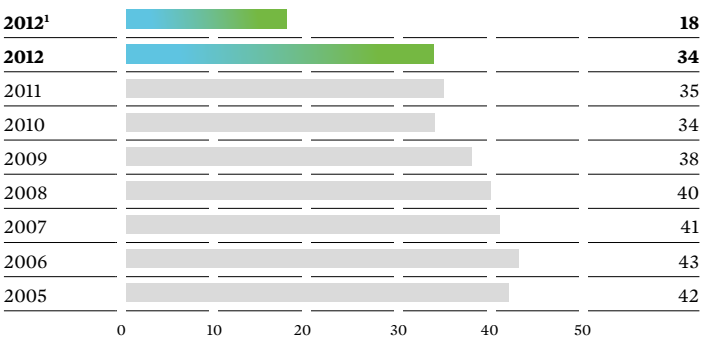
ENERGY CONSUMPTION IN RELATION TO PRODUCTION VOLUME

kwh/t



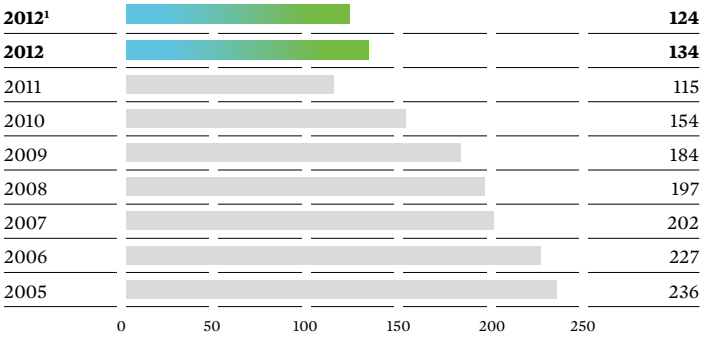
WATER USED IN RELATION TO PRODUCTION VOLUME

m^3/t



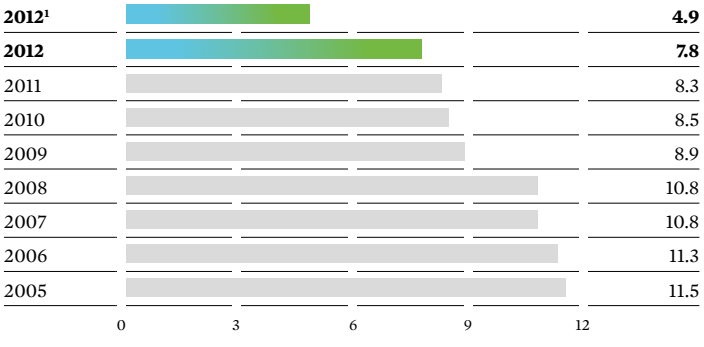
CARBON DIOXIDE EMISSIONS IN RELATION TO PRODUCTION VOLUME

kg/t



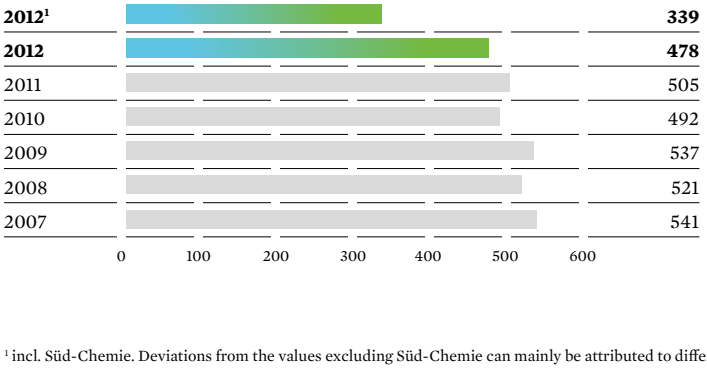
VOLUME OF EFFLUENTS IN RELATION TO PRODUCTION VOLUME

m^3/t



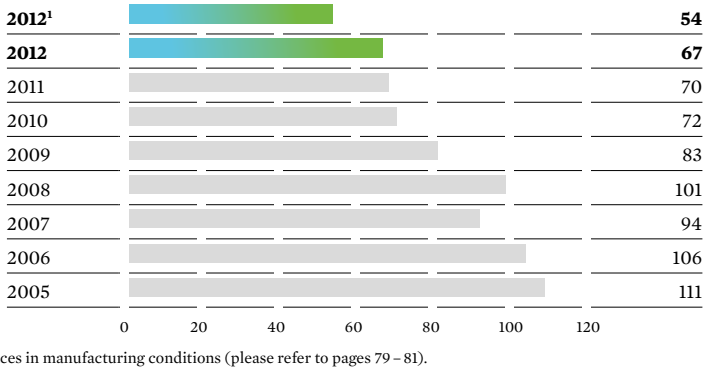
GLOBAL WARMING POTENTIAL IN RELATION TO PRODUCTION VOLUME

kg CO_2 equivalent/t



WASTE IN RELATION TO PRODUCTION VOLUME

kg/t



[1] incl. Süd-Chemie. Deviations from the values excluding Süd-Chemie can mainly be attributed to differences in manufacturing conditions (please refer to pages 79 – 81).

»Clariant has made huge progress with regard to energy efficiency in recent years.”«

Joachim Krüger, Vice President Corporate Sustainability & Regulatory Affairs (CSRA)

Clariant developed its targets through a process of analysis that took place over several years and across all areas of the business, involving all facilities. This process uncovered clear areas of potential for improvement and savings. At the same time, realistic assumptions were made regarding future production and product development. An increase in the volume manufactured of a product that requires a large amount of energy, for example, is entered in the respective calculation differently than a product for which energy plays a less important role in the production process.

Each business area receives individual guidelines for the given indicators. The guidelines are reflected in Clariant's long-term investment planning, since without employing the latest technologies and procedures, the desired improvements would not be possible. While it is difficult to estimate what resources will be needed for some production processes due to their complexity, and even if a greater amount of resources is needed for innovations during the introduction and development phase, anomalies and developments will be compensated for by better than expected improvements in other areas.

SIGNIFICANT IMPROVEMENTS IN ENERGY EFFICIENCY

In recent years, Clariant has become substantially more energy efficient and the consumption of energy per tonne of manufactured product has been significantly lowered. The driver of these savings was the »Energy 2010« program, established in 2006, which measured the company's energy consumption and systematically identified savings potential. The success of this program led to the implementation of its even more extensive successor, »eWATCH«, which is helping to further optimize plants that consume large amounts of energy (see also page 42 – 43).

A similar trend has been observed in carbon dioxide (CO_2) emissions. The drop in greenhouse gas emissions was less marked, registering a 37 % fall overall in the period under consideration. This was largely due to the fact that in recent years there has been increased demand for products that, for technical reasons, produce above-average greenhouse gas emissions, a fact that is thus far unavoidable.

Between 2005 and 2012, Clariant achieved significant improvements in other important environmental indicators as well. For example, the amount of water used in the production process (cooling water, process water, water needed in the product) fell by 20 %, while effluents decreased by 32 %. Moreover, unavoidable waste from the production process fell by a total of 40 % in relation to the volume of manufactured goods during this period.

VII. The consequences of sustainable production: risks and opportunities

Population growth, increasing living standards, and globalization have opened up opportunities, but have also brought challenges. Raw materials are getting scarcer while at the same time demand for them is increasing. This means that the current generation must manage the available resources much more efficiently and responsibly so that future generations have the same chances.

In addition, globalization is placing greater demands on the commitment and productivity of workers. This is linked to noticeable individual and social change. Many people are already feeling the pressure of constantly changing conditions – with the corresponding psychological and physical consequences. A modern company that enjoys lasting success is not only able to do something about this, it must do so. Clariant is already very active in this area through a number of programs.

EXCEEDING EXPECTATIONS

A global chemical company such as Clariant does not simply leave social responsibility to the shareholders as a purely economic matter. Clariant places just as much emphasis on the careful use of resources and protecting the environment as on creating a pleasant and motivational working environment built on mutual respect. Clariant is aware that the road to doing business in a sustainable way is paved with challenges. Market demand for sustainable products will continue to rise. Clariant does not only wish to meet the current market needs, but to exceed expectations as much as possible. An important aspect of this is Clariant's procurement policy, according to which purchasing decisions increasingly take into account issues of sustainability.

TAKING ON RESPONSIBILITY

A caring attitude towards customers, employees, the general public, and the environment strengthens partnerships, upon which success ultimately depends, both in the current market environment as well as in the future. As part of Clariant's efforts to continually improve, a high value is placed on the selection, training, and empowerment of suitable employees. Through specialized HR programs, Clariant provides its employees with the skills and resources they need to work in an even more efficient and innovative way. Clariant takes on responsibility for the environment, employees, customers, and the community with the clearly defined intention of achieving the desired sustainability targets.

THE SUSTAINABILITY@CLARIANT PORTFOLIO VALUE PROGRAM

Global challenges like climate change, demographic shifts and dwindling resources prompted Clariant to launch the Sustainability@Clariant Portfolio Value Program, a tailored program involving corporate customers and employees alike, in late 2012. The program ist backed by the Collaborating Center on Sustainable Consumption and Production (CSCP), based in Wuppertal, Germany. It addresses the issue of sustainability in a comprehensive and forwardlooking way. Three action phases have been defined for further improving the company's sustainability efforts. The program supports existing Sustainability@Clariant activities, thus raising them to the next developmental stage in terms of sustainability.

TAKING SUSTAINABILITY TO THE NEXT LEVEL

The program is initially scheduled to run for a year and a half, and consists of three phases. The first involves the analysis of the status quo of Clariant's sustainability efforts. As part of this, trends and future scenarios are compared with internal and external stakeholders. The second phase concentrates on developing Clariant's sustainability tools further. These include, among other things, tools for assessing sustainability criteria during the development of the product portfolio across the entire lifecycle, and developing sustainability criteria for innovation that take the entire value chain into account. Finally, the third phase focuses on the introduction of the developed tools and the fine-tuning of Clariant's sustainability strategy, particularly as regards sustainable investment, credible communication, and the evaluation of internally-developed methods.

Some of these targets are of a qualitative nature, such as, improving products through continuous research, ever more efficient employee training programs, and intensifying communication with interest groups (or stakeholders).

Others are of a quantitative nature, such as continually reducing water and energy consumption and reducing waste and pollutant emissions. These measures are not only for internal use, but are also intended to show the public that Clariant is now more transparent and credible than before. If the company's concerted efforts make it possible to reach these targets ahead of schedule, the targets will be revised accordingly.

MAINTAINING PERFORMANCE

It should not be forgotten, however, that sustainability requires money and resources. Costlier production processes, expensive raw materials, cleaner, more efficient plants, and programs for employees and other interest groups require (often large) investments and ongoing expenditure. In order for this desirable and worthwhile (from a social as well as an economic perspective) course of action to remain affordable over the long term, the cost of pursuing sustainability needs to be compensated for by reduced costs (e.g. for energy) and additional turnover (e.g. through increased demand for sustainable products).

Clariant's business opportunities therefore lie in the development of innovative products which, for example, require smaller quantities of raw materials (a greater share of which is renewable), entail less risk during the production process, create less waste, and have an ever smaller impact on people and the environment when used. The main business risk is the possibility that the market will not reward the degree of care and effort and will choose to switch to cheaper alternatives as a result. Clariant can prevent this, however, by convincing its customers of the advantages of its products and production processes as a way of helping the environment and securing its own economic future.

EXPLOITING OPPORTUNITIES

A good example of the relationship between effort and opportunity is the standardized and binding EU-wide regulation on the registration, evaluation, authorisation and restriction of chemicals (REACH). This regulation harmonizes and simplifies the chemical laws in individual countries. Only those chemical substances within the scope of the regulation that have been registered in advance and assessed in terms of the possible risks they entail may now be placed on the market.

REACH thus entails significant additional expenditure and workload relating to registration and evaluation activities, but also presents opportunities in the market thanks to company differentiation. REACH makes a significant contribution to further improving health and environmental protection as well as consumer protection.

Clariant is thus able to offer its customers greater benefits through more intensive communication and detailed, customer-oriented information. Overall, REACH will result in stronger ties with customers and suppliers, which are further strengthened by sustainable corporate development. The regulation is also a catalyst for producing new and improved products.

VIII. New branding – key component of a new corporate culture

A company such as Clariant, which has undergone extensive restructuring over a period of many years and has had a number of portfolio changes, needs to implement measures that ensure the creation of a uniform corporate culture throughout the entire Group. This is even more important in light of the merger with a previously independent company, Süd-Chemie, which had sales of roughly EUR 1.2 billion at that time. In July 2012, Clariant began this process with the introduction of a new company-wide brand and value system. Today, Clariant is characterized by its leadership that is based on financial strength and a newly gained self-confidence but not by vulnerability to outside influences. After almost two decades in business, the company has now transformed itself and set new goals. Business Units with above-average profitability in attractive, fast-growing markets will be Clariant's hallmarks in the future. Innovations in technologies, products, and applications are what will lead to sustainable business success.

The new corporate vision and mission have been formulated on the basis of those goals. They illustrate what Clariant aims to become in the coming years, and are the principles that will guide the actions of everybody in the company.

OUR VISION

We aim to be the global leading company for specialty chemicals and to stand out by above-average value creation for all of our stakeholders.

The mission indicates the path by which Clariant will achieve this goal:

OUR MISSION

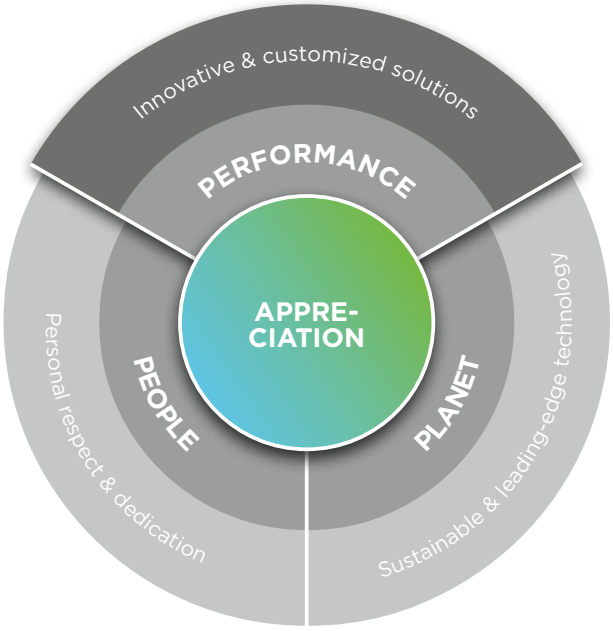
We build leading positions in the businesses we are active in, and we adopt functional excellence as part of our culture. We create value through appreciating the needs of

· our customers – by providing competitive and innovative solutions
· our employees – by adhering to our corporate values
· our shareholders – by achieving above-average returns
· our environment – by acting sustainably

A FOCUS ON APPRECIATION

In order to put this common goal (vision) into action and uphold the promises of the Clariant brand (mission), Clariant has defined new Brand values. The core of the Clariant brand is »appreciation«. Clariant attaches great importance to values, and makes them the central focus of every field in which the company operates and can influence: Performance, People, Planet.

THE CORE BRAND AND BRAND VALUES of Clariant



BRAND VALUE PERFORMANCE – INNOVATIVE AND CUSTOMIZED SOLUTIONS

Clariant can be successful only if its customers are also successful. For this reason, the development and realization of innovative, customized and high-quality solutions are the focus of all Group activities. This requires industry expertise – speed to market, leading technologies, a competitive product line, flexibility, an emphasis on research and development, and an approach that is focused on solutions rather than just products at every level.

BRAND VALUE PEOPLE – RESPECT AND APPRECIATION FOR ALL STAKEHOLDERS

Dialog is a foundation for Clariant's business success in two respects. First, everyone in the company must listen carefully to customers, in order to ascertain their needs and develop customized solutions – because Clariant's success is tied to its customers' success. Second, Clariant's success depends on effective exchanges of ideas and information, on the performance of every individual, and all its employees working together, from research and production through to sales and marketing. An appreciation of customers and employees, respect, transparency and sincerity – these are the core values of the Clariant brand, and they cultivate dialog. In specific terms, this means a focus on customer service, optimal working conditions, high-quality training, good career opportunities for everyone, an international focus, and intercultural expertise.

BRAND VALUE PLANET – SUSTAINABILITY THROUGH LEADING-EDGE TECHNOLOGY

As a global specialty chemicals company, Clariant is part of the global economy, society and the environment. A caring attitude toward customers, employees, neighbors and the environment, and responsible use of resources are ethical obligations and an expression of appreciation. Environmental sustainability is also an important success factor for Clariant and its customers.

Sustainability has long since established itself among consumers as a key criterion for making decisions. Clariant therefore intends to meet the highest standards, and setting new benchmarks through sustainable, leading-edge technologies. This requires the strengthening of sustainable technologies, an improved CO_2 balance, reduced emissions, the efficient use of resources and raw materials, reduced energy consumption, and the assuming of social responsibility at both a global and regional level.

Clariant **SUSTAINABILITY POLICY**

January 2013

Commitment & Clariant Excellence

Clariant commits itself to ethical and sustainable operation and Development in all business activities according to Responsible Care® and Clariant's own Code of Conduct. Clariant strives for a business culture of continuous improvement as well as for sustainable competitiveness and top performance in consideration of Clariant's ethical standards.

Responsibility

Clariant bears an ethical responsibility for sustainable, economic and ecological, as well as fair, business practices. Corporate Social Responsibility is therefore an integral component of our company's philosophy. All Clariant employees are educated and trained to assume responsibility in line with their function, level of authority and qualification.

Clariant's Management System

Clariant's certified Management System adheres to all internal and external standards to which Clariant subscribes and forms the company's documented structural framework as the basis for objectives and programs. The system complies with ISO 9001, ISO 14001, OHSAS 18001, ISO 50001 and Responsible Care®. Achieving and maintaining a high level of quality across all aspects of our businesses, our ESH related activities, Social Responsibility and Responsible Care®, is our understanding of Corporate Sustainability.

Compliance

Compliance with laws, international standards, internal regulations, and Clariant's Code of Conduct is a basic requirement for all our activities. Clariant appreciates voluntary initiatives and provides adequate support to develop effective and efficient safety, health and environmental and energy regulations.

Safety, Security and Environment

Among Clariant's most important objectives are the safety and security of its worldwide activities and the protection of people and environment. We set protection goals which are valid throughout the entire group and monitor and evaluate all aspects of our activities.

Risk and Emergency Management

Comprehensive assessment of risks related to our operations and products are prerequisite to our business processes. Local and global emergency organization is in place to ensure comprehensive emergency management and response.

Innovation and Product Stewardship

We are convinced that it will be essential to understand our customers' needs. Innovation and customer focus is the key to our business. We permanently develop better and new products and services to add value to our customers and to our environment. Concurrently we secure that our products can be used over their entire life cycle in a safe manner for employees, customers, the public and the environment.

Sustainable Operation and Processes

We take initiatives to reduce environmental, safety and health risks in production, storage, distribution and usage of our products and the disposal of waste. This includes the efficient use of energy and resources and the continuous improvement of our processes to minimize the impact of our activities on the environment by increasing our environmental and energy performance.

Third Party Management

Our aim is to establish mutually beneficial relationships with our third party suppliers and contractors in order to support our services on the basis of our internal ESHQ standards, which include Corporate Social Responsibility and Responsible Care®. We encourage our suppliers and service providers to adopt standards comparable to Clariant's policies.

Communication

Clariant fosters a culture of proactive and transparent communication as key to trusting and reliable relationships. All stakeholders are regularly informed about our activities, our targets and our ESHQ and energy performance. We identify the concerns and expectations of our stakeholders systematically.

Monitoring and Review

We monitor and review all business aspects and processes including Responsible Care® issues at regular intervals. Observing our quality and performance is an integral component of our business processes, our top priorities and our strategic planning.

Dr. Hariolf Kottmann
Chief Executive Officer

RESPONSIBLE CARE®
OUR COMMITMENT TO SUSTAINABILITY

Certified Management System
SQS
Reg No 31142
ISO 9001 / 14001 / OHSAS 18001
Clariant International Ltd

EcoTain®
SUSTAINABILITY EXCELLENCE AT EVERY STEP

A holistic approach to sustainability opens the door to innovative products and services

Changes and challenges define the pace of modern-day life. The world's population is growing rapidly, and the available resources are dwindling. This has adverse effects at every level, be it political, economical, or personal. We must therefore already start finding the answers to the questions of tomorrow.

This is why Clariant developed EcoTain® in order to achieve sustainability at product level. EcoTain® supplements our other initiatives and programs in areas such as environmental protection and occupational safety, employee promotion and social projects.

EcoTain® is a holistic approach to sustainability expressed in a four-phase life cycle, and provides a means of assessing and understanding the ecological, economic, and social impact of Clariant's products and business activities over the entire value chain. From the initial chemical design, production, and use of a product all the way to its recycling and disposal, EcoTain® supports the development of sustainable solutions and safer chemical products.

Promoting the health and welfare of man and the environment

The objective of EcoTain® is to protect the health and welfare of man and the environment while simultaneously maintaining the products' performance and efficiency.

- **Health:** People's safety is of central importance. We take the greatest possible care to prevent harming the health of all those involved in the development, production, and use of our products.

- **Environmental protection:** It is important to us to make a valuable contribution toward climate and environmental protection. This is why we are going to great lengths to minimize the adverse effects of our business activities.

- **Safeguarding resources:** We know that the Earth has very limited resources. We must therefore consider our decisions carefully before taking them so that raw materials are used and processed as efficiently as possible.

- **Performance & efficiency:** Our customers deserve sustainable products that provide outstanding efficacy and secure tomorrow's economy.

The sustainable four-phase lifecycle concept

SUSTAINABLE DESIGN

Sustainable design begins in the early development phase of a product. Our aim is to develop efficient products based on safe, non-hazardous ingredients while optimizing the use of renewable raw materials.

RESOURCE-EFFICIENT PRODUCTION

The next stage involves the integration of the product idea into a responsible production process. Sustainable production means environmentally compatible and safe processes that conserve resources and cut emissions and waste. During this phase we optimize the efficiency of chemical reactions and processes.

SAFE AND EFFICIENT USE

The third phase of the EcoTain® lifecycle focuses on the safe and efficient use of the products themselves, spotlighting product advantages in the formulation and final application. Products should not only fulfill their intended functions, but also significantly improve end-product performance and be safe in all defined applications.

ECO INTEGRATION

The final stage of the EcoTain® lifecycle addresses the issue of eco-integration, in other words the product disposal and the impacts disposal has on the environment. Our ultimate goal is always to minimize waste and to recycle waste. Any remaining waste should be as environmentally compatible as possible. For this reason, the environmental properties of our products are evaluated and improved upon continually during this process.

EcoTain®: a sustainable contribution toward securing global food supplies

The world's population will in all likelihood increase by 40 % over the next 20 years. This will bring considerable challenges for food supply, not least because more and more agricultural land will be used for non-food plants. At the same time, consumers in industrialized nations are increasingly moving toward organic and natural products. However, agricultural land is already over-farmed in many places and as a result, farmland per capita likely to decrease in relative terms. This presents immense challenges for agriculture, especially since regulatory authorities are constantly enacting tougher regulations for cultivation. The agrochemicals industry must therefore look for innovative solutions for securing global food supplies by finding ways to increase yields, use resources more efficiently, and provide the greatest possible protection for humankind, animals and the environment. EcoTain® enables the development of efficient adjuvants and formulation aides for pesticides that are based on up to 95 % natural raw materials, are manufactured in an especially environmentally compatible manner, and can increase yields in agriculture.

Making aviation more environmentally compatible with EcoTain®

The EcoTain® concept can in principle be applied to products in many areas, including aircraft and runway de-icing agents. Clariant is a world leader in this field. In addition to functional fluids, we also offer systems and equipment for the extensive recycling of these de-icers. Our product range spans everything from design and installation to the operation of the necessary recycling equipment. The results of these services are impressive. For example, airport operators using the recycling equipment can reduce their consumption of new de-icing fluids by about two thirds, thus decreasing the need to procure new fluids significantly. And lower waste water treatment costs save yet more money. For larger airports, such as the one in Munich, this adds up to a financial saving of about EUR 1 million a year and a reduction in CO_2 emissions of more than 5 000 tons.

EasyWhite Tan
SIMPLER AND CHROME-FREE

New tanning procedure revolutionizes leather manufacture

—
MAKING A SHOE
About half of all processed leather is used to make shoes.

It's still in rather good condition, the size 5 leather shoe discovered by researchers in a cave in Armenia in 2008. This archaeological find from the Copper age proves that, even more than 5 500 years ago, man not only placed a high value on the valuable natural material leather but also knew how to use it. To this day, leather is still used mainly to produce footwear which accounts for almost half of all leather goods, followed by automotive interiors (23 %), the manufacture of furniture (16 %) and garments (12 %).

In order to make it utilizable and long-lasting, leather must first be tanned. In the tanning process, the hide is transformed by the tanning agent into the durable and permanently flexible leather. Chemically speaking, the tanning agent cross-links the fibers from the protein which give the hide its special structural properties. The type of tanning agent is very important in determining the properties of the finished leather – hardness, moisture, strength, temperature stability – and hence its potential applications.

Vegetable tanning has almost died out

Among the many different substances man has used for tanning down the millennia, only a few vegetable tanning agents still exist. Today, mainly two techniques are used. One is chrome tanning of wet blue leather, the most widely used process for 60 years, which accounts for around 85 % of leather production. The other is chrome-free tanning of wet white leather with aldehydes or phosphonium salts, which accounts for about 13 %. Wet white leather is used mainly in the automotive sector, but its properties are less suitable for most other applications, as the processing creates more stable network structures in the hide and the leather therefore tears more easily than chrome leather. Moreover, with aldehyde-based processes consistent production quality can only be assured by permanent process controls.

Clariant sets new standards

This was what prompted the development of a completely new tanning process for chrome-free leather. The result of Clariant's many years of research is the tanning agent Granofin Easy F-90 and the tanning process EasyWhite Tan designed to match it. This has simplified and shortened the production process significantly and has made the tanning of leather far more efficient. At the same time, Granofin Easy F-90 reduces the consumption of salt and water during tanning.

The key factor in this process is the self-reactivity of Granofin Easy F-90. It makes several process steps superfluous in both classical tanning methods, such as pickling in acid and the complex management of the pH level. This saves time and effort: The actual tanning process is shortened from previously twelve to fourteen hours to now eight hours, and only two controls are needed instead of eight. At the same time, about one third less chemicals and correspondingly less storage space is required – a powerful argument, as the quantities involved are huge. The environment also benefits from the reduced complexity of the process: Salt consumption, for example, is reduced by 80 %.

EasyWhite Tan meets strict quality requirements

Despite all these advantages, no sacrifices have to be made in terms of quality. EasyWhite Tan leather has approximately the same quality characteristics and range of applications as chrome-tanned leather. Granofin Easy F-90 is already undergoing intense practical trials with customers, such as the shoe manufacturer ECCO. The company is convinced of the new leather's enormous potential. Trials are also under way in China, one of the world's major leather markets.

In the medium term, Granofin tanned leather could completely replace the existing chrome-free wet white techniques and replace chrome as a tanning agent to an estimated extent of 20 to 30 %. And in the old-established leather industry where chrome has held sway for more than half a century, that really would be a revolution.

Velsan® SC
PROTECTS THE SKIN

Outstanding efficacy booster for
fewer preservatives

Cream is a demanding product. It should contain as few irritating preservatives and additives as possible, due to particularly sensitive skin, but must also protect the skin against bacteria and fungi, which can rapidly multiply in creams and lotions. To date, protection with the fewest possible preservatives has seemed like trying to square the circle, but Clariant has now successfully achieved this with its innovative cosmetic additive Velsan® SC. Velsan SC is an outstanding efficacy booster, using very few preservatives. The synergy between this substance produced from natural raw materials and conventional preservatives is a novel approach in the cosmetic industry and has been filed for patent worldwide.

Without protection against germs, water-based cosmetics would rapidly spoil because bacteria, fungi, and yeasts are present everywhere in the natural environment – floating in the air, settling on surfaces, and living on our skin. After opening for the first time, a cream would contain millions of germs that could multiply as if on a culture medium. For conventional cosmetics, for example, more than 50 approved preservatives are listed in the European Union, but these have increasingly drawn criticism: In individual cases, they can cause allergic reactions and sometimes irritate the eyes and mucous membranes.

Natural cosmetics also contain preservative ingredients, usually alcohol, essential oils, and organic acids, but these can also have drawbacks. For example, they can dry out the skin or cause allergies, and often also have a strong intrinsic odor. The cosmetic industry has therefore long been on the lookout for effective alternatives to the widely-used preservatives.

Naturally-based product with good tolerance

Velsan SC is an excellent supplement: It breaks open the cell membranes of the harmful microbes, allowing the conventional preservatives to penetrate much more easily into the cell, and then attack and kill the bacteria and fungi from the inside. Since preservatives such as aromatic alcohols or organic acids work better when combined with Velsan SC, much less of them is needed to provide the same protection against microbial contamination. For example, alcohol and organic acid content can often be reduced by half.

What is particularly good news is that Velsan SC has proven to be well tolerated by the human body. It does not irritate either the skin or the eyes and – in contrast to many natural substances – has shown no allergenic potential in tests. Velsan SC also has another positive feature: It is co-emulsifying, which means that oil and water, the main components of most cosmetics can be mixed thoroughly and permanently with one another. In this way, Velsan SC also helps to reduce the concentration of emulsifiers.

PURE NATURE

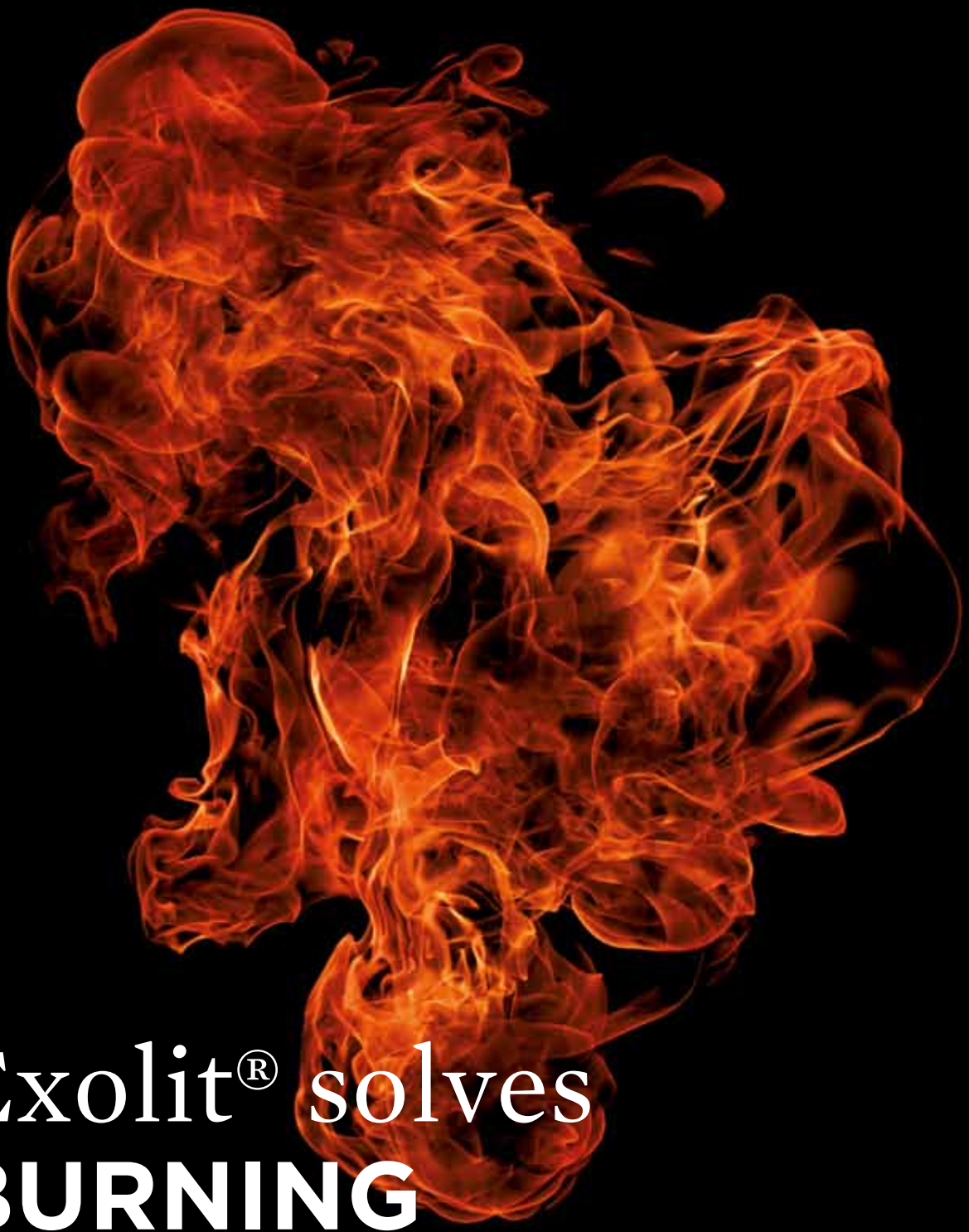
100 %

Velsan® SC is made entirely using natural raw materials.

Velsan SC also owes its good tolerance to the fact that it is made entirely using natural raw materials. One of its main components, sorbitan, is produced from the sugar of wheat and corn, while the other, caprylic acid, is derived from palm or coconut oil. Ecocert, a prestigious international organization for natural and organic cosmetics, has certified Velsan SC as meeting its strict guidelines and awarded the product its recognized seal.

Biodegradability a further advantage

Unlike many conventional preservatives, Velsan SC is also fully biodegradable. Water is the only product from its manufacture, no waste exists. For all of these reasons, this versatile product will soon be used in an increasing number of cosmetic products. These include mainly creams and lotions, but also face and body gels, and shampoos. In addition to its many positive properties, Velsan SC is also a cost-effective alternative to conventional substances. This new product therefore has outstanding market potential.



Exolit® solves **BURNING PROBLEMS**

A new flame retardant stops fire in its tracks
in an environmentally compatible way

EXOLIT® OP

Environmental seal of approval

Products containing Exolit® OP can also be awarded environmental certificates such as the Blue Angel, TCO and the EU environmental stamp.

Did you know that, in the case of a short circuit, the energy stored in the battery of a mobile phone is sufficient to release enough heat to set the plastic components of the phone on fire? Such incidents are, however, meanwhile extremely rare as components used in making the phone are subject to similar fire safety regulations as apply to other electronic and electric devices – from the standard navigation device to the laptop and the washing machine.

The answer to this problem lies in flame retardants, additives which account for up to 20 % of the processed volume. They prevent or slow the risk and spread of fire. Fire retardants used for decades which are based on organic chemicals containing for example bromine or chlorine have increasingly come in for criticism. Some substances belonging to this class of materials have therefore been banned in the European Union and the US.

Conventional agents can release corrosive smoke

Two dangers associated with these halogenated fire retardants are discussed. In the case of fire, corrosive smoke can be released as hydrochloric acid or hydrogen bromide are formed. Decomposition products such as halogenated dioxins can also form. Certain halogenated fire retardants are also suspected of being damaging to health even without a fire. They are generally relatively stable substances and are fat-soluble. This means that they are capable of building up in animal and human tissues. Various studies have shown the presence of halogenated fire retardants in household dust, breast milk and in a range of animal tissues. This is due to the fact that these substances are not only released into the environment on production and processing, but also possibly through the wear and tear on materials and on their disposal.

Exolit as halogen-free alternative

Exolit, a fire retardant produced by Clariant, provides an environmentally compatible alternative. It is based on halogen-free, organic phosphor compounds. Comprehensive toxicological tests and examination over the lifecycle of the plastic reveal a good environmental profile. There is, however, no one fire retardant solution for all applications. Every plastic and every application present different challenges. With Exolit, customized fire retardants for many applications can be provided. The most recent member of the Exolit family, the patent-protected Exolit OP (OP stands for organic phosphor compounds), which makes plastics such as those used in mobile telephones, and in a whole range of other electronic and electric devices, safer in terms of fire risk.

There is a range of versions of Exolit OP, all of which reveal a positive environmental profile as well as outstanding efficacy in line with the strictest fire safety regulations. The product is therefore a real alternative which performed very well in a study conducted by the German Fraunhofer Institute for Environmental, Safety and Energy Technology in Oberhausen and in the ENFIRO project sponsored by the European Commission. The release of Exolit components from plastics over its entire lifecycle, that is, from production of plastic components as well as from use – with and without fire – and finally from recycling or waste incineration was examined. In all these stages, it was shown that Exolit OP found its way into the environment in only very low amounts. Exolit OP performs particularly well in toxicology tests: it does not build up in living organisms and proved harmless in tests on mammals and fish, which is why it is also not classified as a hazardous material. With Exolit OP, Clariant not only satisfies environmental regulations, but products containing Exolit OP are also eligible to receive environmental approval seals such as the Blue Angel, TCO and the EU environmental stamp.

An innovative dyeing process from Clariant not only aims at protecting the environment, it also offers greater color variety and higher quality. Whether elegant or artificially aged, worn with a jacket or a T-shirt: jeans go well with almost anything. They are simultaneously a lifestyle statement, a worldwide cult classic, and a long-selling fashion garment – with no end to the success story in sight. The statistics tell us that every American has eight pairs of jeans, while Europeans come a close second with five to six pairs each. The immense number of almost two billion pairs of jeans are produced each year, claiming about 10 % of the worldwide cotton harvest.

The conventional indigo dyeing process, however, impacts the environment, and so Clariant has now developed its innovative Advanced Denim concept, a groundbreaking new dyeing process adapted to current needs that operates completely without indigo. It also needs much less water and energy and greatly reduces cotton waste. Furthermore it offers a greater variety of colors, better color quality, and new fashion effects. Experts are convinced: Advanced Denim will revolutionize jeans production.

Indigo looks great, but needs a lot of energy and water

Denim is the name given to the typical, tough jeans material which is produced from cotton yarn and in the conventional process is dyed blue with indigo. In its natural agglomerated form, this dye is not soluble in water. The dye molecules first have to be separated before dyeing – this is done by reduction using the strong and environmentally critical reducing agent sodium hydrosulfite. Because reduced indigo also adheres poorly to the cotton, dyeing has to be repeated six to fifteen times. In each of these steps, the cotton yarn is passed through a dyeing bath and then oxidized in the air to fix the dye.

This process requires not only vast amounts of energy but also large quantities of water. Indigo dyeing using slasher ranges also produces large amounts of cotton waste because the production lines through which the cotton threads pass can be up to one kilometer long. Every time the color is changed, the fibers remaining in the machines have to be disposed of. Equally not very environmentally compatible are substances like hypochlorite and permanganate used to achieve fashionable washed-out effects in the final finishing stage.

Advanced Denim **MAKES BLUE JEANS GREEN**

The sustainable revolution in jeans manufacture

ADVANCED DENIM

200 l

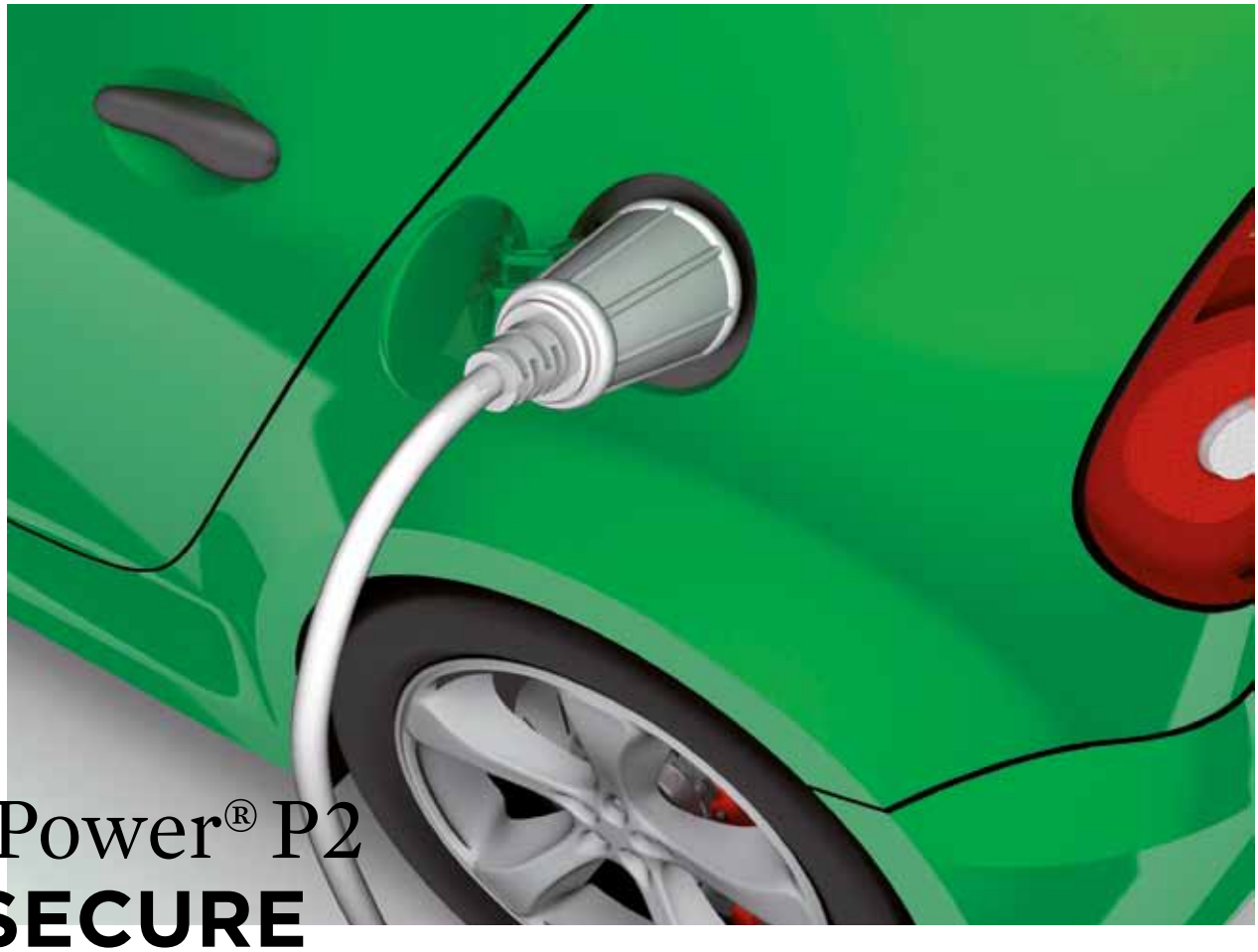
of water can be saved when making just one pair of jeans by using the Advanced Denim technology from Clariant. Almost two billion pairs of jeans are produced every year.

Clariant develops environmentally compatible generation of dyes

With the revolutionary Advanced Denim technology, Clariant has now developed a more ecologically compatible dyeing method. Instead of indigo, the Pad/Sizing-Ox process uses a new, more environmentally compatible generation of concentrated sulfur dyes such as Diresul® RDT. In the first step – as with indigo – the dye molecule is reduced, using a sugar-based reducing agent. Since sulfur dyes have a different chemical structure than indigo, they bond far better with the cotton. In the Advanced Denim Pad/Sizing-Ox process, a single bath is therefore sufficient to intensively and permanently dye the yarn. A second rinsing step is no longer necessary. The dye is then oxidized with efficient fixing agents to make it adhere. In the same bath, using the recently patented Arkofil® DEN-FIX, the yarn is coated with a layer of starch to protect it during the following strenuous weaving operation. The groundbreaking technology of Advanced Denim Pad/Sizing-Ox therefore greatly simplifies and shortens the production process.

Naturally, this considerably improves the eco-compatibility of the production of denim. Compared to the conventional process of indigo dyeing, Advanced Denim Pad/Sizing-Ox can save up to 92 % water, 30 % energy and 87 % cotton waste. The innovative sulfur dye Diresul RDT has already been awarded several ecolabels for its major environmental benefits. These include the EU ecolabel, the Oeko-Tex® Standard 100, a worldwide uniform test and certification system for textile products of all processing stages, as well as the Global Organic Textile Standard (GOTS), the world's leading standard for organic fibers, and the bluesign® standard. This is awarded for manufacturing processes geared to maximum resource productivity under environmental protection, health and safety aspects.

Besides the ecological benefits, the new Advanced Denim concept also opens up completely new possibilities for jeans design. To begin with, there is a wider range of colors: from sky blue to navy blue, from graphite gray to olive green, any desired color nuance can be obtained much more precisely and – thanks to the outstanding color fastness of Advanced Denim Pad/Sizing-Ox – more reproducibly than ever. Designers also gain new freedom in the use of color gradients, shading, imprinting, additional colors and the popular bleached effects.



Life Power® P2 AS SECURE BRIDGE TO ELECTRICITY STORAGE

New cathode material for batteries provides more secure energy storage and reliable power over a long lifespan

Alternative drive concepts for the automobile industry are one of the biggest challenges of our time. Many hopes for the future rest on electromobility and the generation of power from renewable energy sources. A special challenge here remains the range and weight of batteries in relation to their power storage capacity. Cathode materials such as nickel and cobalt used in conventional batteries are not only rare, expensive and damaging to health, but also harbor a considerable fire risk. Now, Clariant offers a solution in this field: lithium iron phosphate. This material is currently not just a safe cathode material for car batteries on the market at the moment, it is also a high performance material, has a long lifespan, is quick to charge and also has a much better tolerance to both heat and cold. Rechargeable batteries made from this material provide the best foundation to help e-mobility to greater acceptance. An additional field of application is in affordable accumulators which can be used in the home to store energy from renewable sources.

Life Power® P2 for future-orientated hybrid vehicles

A large advantage of electric motors is their high efficiency. Around 90 % of the electric energy supplied is converted to kinetic energy, whilst diesel and petrol motors waste 65 to 70 % of energy supplied through heat loss. Yet an electric vehicle currently costs around EUR 10 000 more than a conventional car and is thus simply too

»The lithium iron phosphate cathode material P2 by Clariant offers excellent material security.«

EngHeng Khoo, Head of Business Line Energy Storage

expensive. Today's lithium ion batteries can also only power a car over a range of 100 to 150 kilometers. Experts therefore assume that in the next ten to 15 years, hybrid vehicles will dominate the e-mobility market.

This technology combines the electric and combustion motor and provides a satisfying compromise between performance and environmental compatibility – at an acceptable price. Such a plug-in-hybrid requires a 35 kilogram battery (5 kWh) for its electric motor and can power the car for up to around 40 to 50 kilometers – enough for 80 % of all journeys. If the battery runs below a certain charge level, the vehicle automatically and almost unnoticeably switches to the diesel or petrol motor.

New batteries are now available for hybrid vehicles which use the innovative »Life Power P2« by Clariant. The cathode is made from lithium iron phosphate providing high material security. In contrast to conventional cathode materials based on nickel or cobalt, lithium iron phosphate does not release oxygen which could fuel a battery fire and so also set the vehicle on fire.

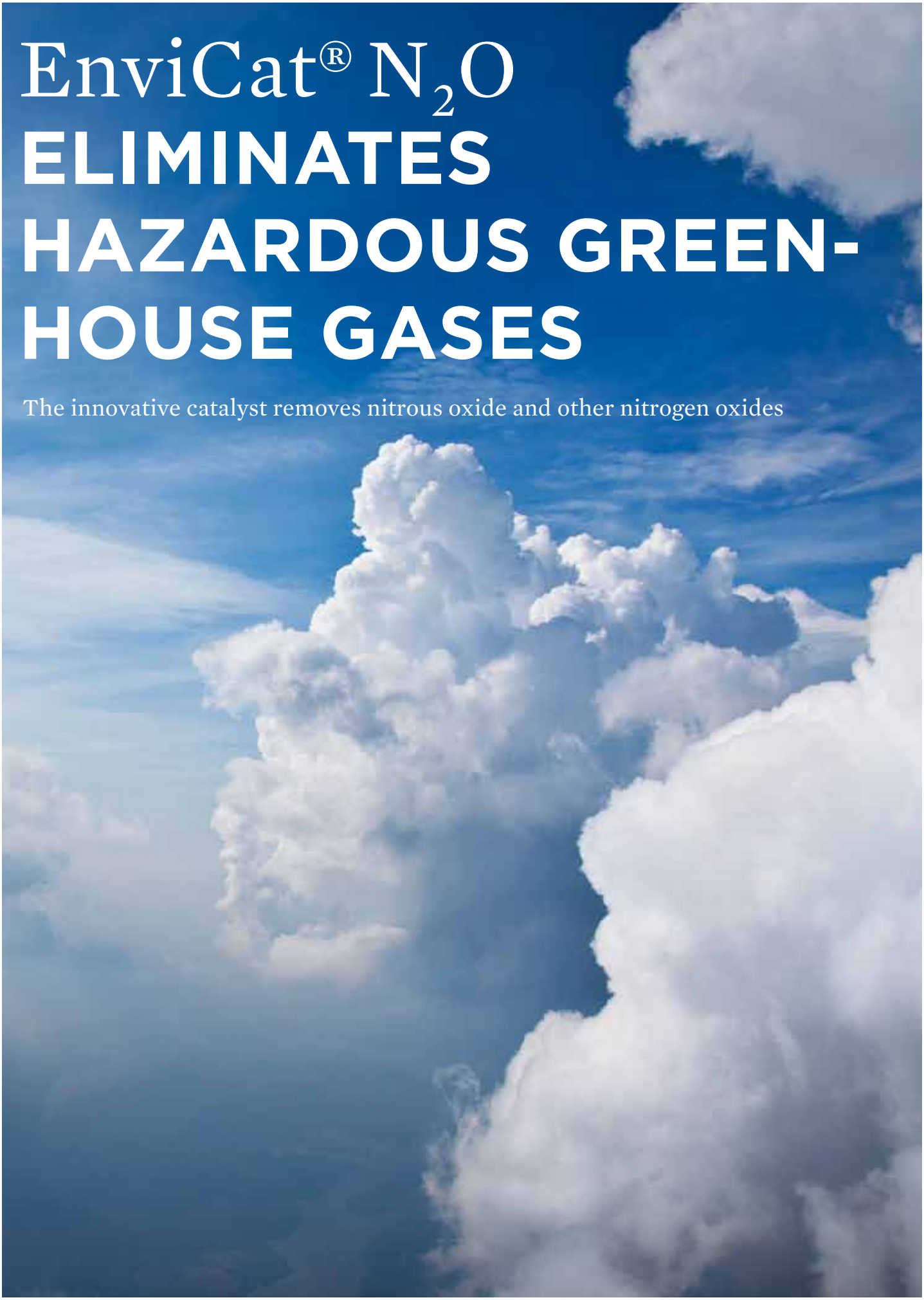
Longevity and broad application range

A further benefit of Life Power is its longevity. The estimated lifespan of a battery using Life Power technology stands at around 4 000 charge cycles or approximately ten years. Even after these 4 000 charge and discharge cycles, it still shows around 80 % of its initial capacity. A battery with Life Power can be charged quickly with full charge achieved in only six minutes. With a storage capacity up to 160 watt-hours per kilogram, the material is also very energy-rich. There is also the fact that lithium iron phosphate – quite differently to conventional battery materials – has a high temperature tolerance stretching from minus 30 °C to plus 70 °C. The battery therefore remains operative both through the Canadian winter as well as on a hot summer's day in Southern Italy. Life Power is also future-proof, as both lithium and iron are available in sufficient quantities and are thus relatively cheap raw materials with which – in contrast to nickel and cobalt – environmental and health risks can be considerably reduced.

Prototypes of batteries using Life Power are also used in electric cars. The material is also suitable for production vehicles. Since 2010, a renowned German sports car manufacturer has offered a battery with Life Power as an added option. Further applications are batteries for electric scooters or motorbikes. In order to be equipped for the rise in global demand, Clariant commissioned a new production site in Canada at the beginning of 2012. It can produce 2 500 tons of lithium iron phosphate each year. This would be sufficient to provide cathode material for the batteries of up to 50 000 electric or 500 000 hybrid vehicles per year. With this new cathode material, whose safety profile is better than that of conventional materials, Clariant makes a crucial contribution to future mobility.

As soon as the number of electric vehicles is large enough, they could even play an important role in managing renewable energies. Visionary concepts such as »vehicle to grid« see electric vehicles as power storage devices for the grid. Where too much power is produced, for instance by unpredictable wind-power plants, this power will be stored in the batteries of electric vehicles. If the grid requires additional energy, power providers would then simply draw it back from the batteries in electric cars. In Germany and Japan, initial field experiments using this concept are already underway.

As a high performance and low cost battery, Life Power is also especially interesting for stationary batteries storing power from renewable energy sources, in particular that generated over cycles, as from photovoltaic cells. The power storage devices already available on the market allow efficient ways of using the power so generated and in achieving a considerably degree of self-sufficiency.



EnviCat® N_2O ELIMINATES HAZARDOUS GREEN-HOUSE GASES

The innovative catalyst removes nitrous oxide and other nitrogen oxides

Melting ice in the Antarctic, devastating droughts in Africa, violent storms and rainfall in Europe – the signs of climate change can no longer be ignored. Most people are aware that carbon dioxide is a major contributor to the greenhouse effect – but know hardly anything about other gases. Nitrous oxide, for example, is the third most damaging climate gas after methane and is responsible for about 6 % of overall climate change. One unit of nitrous oxide is about 300 times more damaging to the climate than the same amount of CO_2.

NITROUS OXIDE

300 times

more damaging for the environment than CO_2.

Manufacture of fertilizers generates nitrous oxide

Nitrous oxide results mainly from the industrial production of nitric acid that is used in the manufacture of fertilizers and other processes. Nitrous oxide – commonly known as happy gas or laughing gas – sounds like a completely harmless substance. For humans, the gas with the slightly sweetish odor and consisting of the elements nitrogen and oxygen (chemical formula: N2O) is in fact benign when handled correctly. For example, it is used to foam whipped cream. If inhaled, it can bring about a spasmodic inclination to laugh and a condition resembling drunkenness. It was formerly used as an anesthetic for this reason.

Nitrous oxide occurs naturally in the Earth's atmosphere, but only at harmless levels. In higher concentrations, however, it is extremely harmful for our climate because of its about 25 times greater longevity in the Earth's atmosphere than CO_2.

Nitrous oxide as damaging to climate as 50 million cars

About seven kilograms of nitrous oxide are generated as a by-product per metric ton of nitric acid produced. An estimated 400 000 metric tons of nitrous oxide are therefore emitted every year by nitric acid plants worldwide. This has the same atmospheric pollution impact as 120 million metric tons of carbon dioxide – equivalent to the emissions from about 50 million cars, the total number currently in use in Germany and the Netherlands. For several years, the legislator has therefore been imposing strict limits on nitrous gas emissions; exhaust gas must now contain no more than 400 ppm (parts per million) N2O.

To ensure compliance with these limits, Uhde has combined its decades of technology competence in the field of nitric acid plants with Clariant's globally acknowledged expertise in developing and manufacturing catalysts to jointly develop the catalyst EnviCat® N2O. This process removes the nitrous oxide as well as other nitrogen oxides (often called NOx) that represent a considerable pollution threat for man and the environment. The nitrous oxide is converted in two stages: In the first stage, the nitrous oxide is decomposed to oxygen, nitrogen and nitrogen oxides with the aid of the catalyst EnviCat N2O. In the second stage, the nitrogen oxides are mixed with ammonia to produce harmless nitrogen and water.

Superior technology eliminates nitrous oxide

At the heart of the process is the highly active catalyst EnviCat® N2O which consists of porous, crystalline zeolites. Zeolites are a group of minerals containing mainly aluminum, silicon and oxygen. In Clariant's EnviCat® N2O, iron was dispersed into the crystal lattice of the zeolites. Like all catalysts, EnviCat® N2O takes part in the chemical reaction without being used up itself. In the EnviNOx reactor, the nitrous oxide is passed through the catalyst bed at temperatures between 300 and 500 degrees Celsius depending on the application. The oxygen in the nitrous oxide molecules attaches to the iron molecules and temporarily binds firmly to them because of the strong chemical bonds. When the nitrous oxide molecules are stripped of their oxygen atoms, they transform into regular nitrogen.

The catalyst is so effective partly because of its ability to bind and activate nitrous oxide molecules, and partly because it can release the oxygen atoms again so that they can produce molecular oxygen and water as further end products.

To date, 20 of these plants have been installed around the world. Every year, the EnviNOx® process purifies climate-damaging nitrous oxide emissions equivalent to an output of more than twelve million metric tons of carbon dioxide, comparable to the emissions of more than four million passenger cars. If all nitric acid plants were equipped with EnviNOx®, this figure could be increased more than tenfold.

sunliquid® CONVERTS STRAW INTO BIOFUEL

New procedure uses grain production leftovers rather than edible plants

Modern biotechnology changes straw into an equally valuable, sustainable and climate-friendly product: fuel. In the face of climate change and dwindling reserves of fossil fuels, the search is on for an environment compatible alternative, especially in the automotive sector which consumes about 50 % of the world's crude oil production. Biofuels already exist, but so far they have been produced from canola, corn or cereals – edible plants also needed as food. With the sunliquid® process, Clariant has now developed a procedure with which it is possible to convert difficult-to-access sugar from previously unusable plant residues like cereal straw, corn stover or residues from sugar cane almost completely into high-quality ethanol. The cellulosic ethanol produced by this process is a second-generation biofuel distinguished by a first class climate balance.

The sunliquid® process can utilize agricultural residues on a regional basis: for example, corn stover in North America, bagasse in South America or wheat straw in Europe. About five to six tons of straw and six to seven tons of grain grow on one hectare of wheat field. The grain consists mainly of starch, a readily degradable form of sugar which can be converted relatively easily to bioethanol. The straw also consists mainly of sugar, but bound in fibrous lignocellulose. This is nature's way of making the stem of the plant more robust and stable than the fruit. Previously, this difficult-to-access »straw sugar« could not be used for bioethanol production.

Optimized enzymes break down cellulose

With this new biotechnology process, Clariant has now also succeeded in converting straw into biofuel. The plant residues are first crushed, mechanically and thermally pretreated and thereby decomposed into their three main constituents cellulose, hemicellulose and lignin. Then, enzymes produced within in the process break down the cellulose and hemicellulose into different types of sugar. A small amount of the available raw material is used to produce the enzymes. Under optimal process conditions, microorganisms customized to each raw material very rapidly produce a large quantity of enzyme. This saves costs and makes the process independent of enzyme suppliers. The enzymes are then added to the

»With the innovative sunliquid process, Clariant has now developed a technology, that converts previously unusable plant residues into high-quality ethanol.«

Andre Koltermann, Head of Biotech & Renewables Center

bulk of the raw material. With enzymes individually tailored to the raw material and process conditions, the process is considerably more efficient than with standard enzymes. They extract all the types of sugars present in the straw, leaving behind insoluble lignin, which is used as a fuel to generate all the energy required for the process. In the following step, all the sugars are fermented simultaneously and converted to ethanol using specially developed fermentation organisms. Finally, in a process developed by Clariant, »pure« ethanol is won from the fermentation mixture with the aid of adsorbers.

sunliquid® has excellent environmental credentials

One of the outstanding advantages of the sunliquid® ethanol is its superb climate balance: Greenhouse gas emissions are reduced by around 95 % compared to fossil fuels. That's considerably more than with conventional biofuel. The sunliquid® process is also outstandingly efficient – with its optimized enzymes exactly tailored to the raw material being processed, it delivers high sugar yields. And because it can convert not only glucose but also the more difficult-to-ferment C5 sugars, it produces about 50 % more ethanol than previous processes. The straw that has grown on one hectare of wheat field – 10 000 square meters – can be used to produce one ton of ethanol. This is enough to drive about 15 000 kilometers and represents the average annual mileage of a passenger car.

Another plus point: The sunliquid® process is energy-self-sufficient. No additional energy is needed to produce ethanol; the entire process energy originates from the lignin obtained as residue in the biomass. And costs are also reduced because the enzymes, previously the most costly single item, are produced directly within the process itself. Clariant has therefore succeeded in developing not only an environmentally compatible but also a cost-effective process for the manufacture of cellulosic ethanol.

sunliquid® – a process with future

About 300 million tons of grain are produced annually in the 27 member states of the European Union. This represents an annual straw quantity of about 240 million tons, of which up to 60 % would theoretically be available for ethanol production. This would be sufficient to cover about 25 % of the EU's gasoline requirements in 2020. This would not only help to reduce the dependence on fossil fuels, but also the dependence on countries exporting crude oil which are often located in unstable crisis regions. Imports would be replaced by local fuel production, because every production plant can use the agricultural residues growing in the immediate vicinity. Green jobs and additional income for regional agriculture would be the result.

In July 2012, Germany's first and so far largest demonstration plant for cellulosic ethanol came on stream in Straubing in Bavaria – a milestone in the development of the sunliquid® technology. The plant has an annual output of 1 000 tons and is designed to establish and further optimize the industrial-scale sunliquid® process. The Bavarian state government and the Federal Ministry of Education and Research are sponsoring the future-oriented project. Licensees from around the world can now acquaint themselves with the process on the ground. Each commercial plant will later be producing 50 000 to 150 000 tons of bioethanol a year, thereby contributing to making the world's fuel supply more sustainable, climate compatible and safe.

Made for your convenience
EASILY DISPERSIBLE PIGMENTS

In the paint manufacturing process, one of the most important steps is the dispersion of pigments. Clariant has developed a new range of organic pigments: the »Easily dispersible pigments« – called ED pigments – to simplify this process.

As the name suggests, ED pigments can be easily incorporated into paint systems with a dissolver, and without an additional milling step. This is an innovative approach to paint manufacture which offers efficiency as well as savings in raw materials and energy. To achieve »Easily dispersible« characteristics of organic pigments, Clariant has developed an economic production process which includes surface treatment of the pigments with highly efficient and widely compatible dispersing additives.

The dispersion process

The most important and complex step in the coloration of paints is the homogenous distribution of pigment particles in the binder system. Organic pigment particles in powder form exist as agglomerates. During the grinding process, the particle size is reduced to achieve the optimum color properties in the paint system. Ideally, this means reducing agglomerates to primary particles, which

COST SAVING POTENTIAL

– 30 %
Conversion Cost

– 85 %
Production time

– 90 %
Electricity

is a highly specialized, time consuming and expensive process that requires costly technical equipment. In addition, the pigment dispersion has to be stabilized with expensive dispersing agents to prevent flocculation.

The innovative pigment approach

The dispersing additive in the ED pigment is incorporated during manufacture. The additive is adsorbed on the pigment surface and facilitates separation and wetting of pigment particles during the dispersion process. An optimum amount of additive is present on each ED pigment surface to achieve the necessary dispersion properties, thus reducing or even eliminating the need for additional dispersant in the mill base formulation. In general, ED pigments can be dispersed in about 30 minutes with a dissolver and offer obvious advantages over respective regular pigments.

Easily dispersible pigments for water-based pigment dispersions in decorative paints

One product of the ED pigment range is EDW:

What exactly is EDW? Easily dispersible water (EDW) pigments are organic pigments used to manufacture aqueous dispersions to tint decorative paints. Their modified surfaces improve their dispersibility in the tinter which allows us to simplify the dispersion process. This results in cost efficient manufacture.

Environmental benefits

· lower energy consumption
· less cleaning effort
· less polluted wastewater
· reduced amount of additive
· ideal for production of low VOC® paints
· shorter process time, high color brilliance

Dispersibility The EDW pigments can easily be dispersed with a dissolver using a reduced amount of additives. They can also be dispersed by means of a bead mill in a shorter time. In both cases, EDW pigments offer cost savings thanks to simplified processes.

Applications Recommended fields of application of the EDW range are water-based pigment dispersions used for In-plant / Point-of- Sale tinting of decorative paints like aqueous emulsion paints. EDW pigment based dispersions can also be used for tinting most solvent based alkyd paints.

Excellent compatibility The additives used to modify the surface of EDW pigments are widely compatible with most decorative paints. According to our current knowledge, the EDW additives are compatible with all commonly used dispersing agents without showing any adverse effects.

Sustainability EDW pigments can be used, for example, to produce tinters like Colanyl® 500. They are highly suitable for manufacturing ecolabeled low VOC* paints according to EU Directive 2004/42/EC (20129) as well as emulsion paints labeled with the German »Blue Angel« (Guideline RAL ZU 102). Furthermore, by simplifying the dispersing step, EDW pigments improve the eco footprint of paint manufacture. The processing time is shorter, leading to increased production capacity while simultaneously saving on electrical energy and generating less waste water.

* VOC = Volatile Organic Compounds

Sustainability in production

SUCCESS IN MANY SMALL STEPS

Sustainability is lived by all Clariant employees.

2012 was the most successful year in terms of the suggestions for improvement made by staff in an improvement process launched some years ago. Modifications and optimizations in production reduce water consumption and improve the quality of effluent, bring down energy consumption and reduce the risk of injury and illness among employees – thereby also reducing manufacturing costs. Nevertheless, these improvements are generally associated with high investment costs. The aim then is always to achieve the right balance between the ideal and the economic necessity.

Process optimization allows more rapid product switch in production

In pigment production, switching products more quickly and efficiently in the manufacturing process has been bringing down energy and water consumption as well as the time requirements since 2012. Up to now, the color pigments Novoperm Yellow HR 70, Permanent Orange RL 70 and Novoperm Red HF3S 70 have all been manufactured in alternating batches on one production line in the AZO IV site in Frankfurt Höchst. The frequent change of product – in order to react quickly to client demand – necessitated expensive cleaning of machinery which was both time and personnel intensive. This was to the detriment of production capacity. But this wasn't the only downside. There was also the fact that the quality of cleaning wasn't always adequate. This meant that after switching to another pigment, there were quality problems in color characteristics. This resulted in a not insignificant volume of unsalable goods. In consequence, production volumes ordered could at times not be manufactured and supplied in adequate quantities.

This unavoidable procedure has resulted in a loss in both revenues and client satisfaction as well as increased costs. Action was therefore needed. The targets were to reduce the time taken to switch products by at least two days, to eliminate quality problems arising after the switch, and to minimize volumes of unsalable goods.

A comprehensive study showed that on switching products machinery was not adequately cleaned in certain areas owing to difficulty of access. As a result, residue of intermediate products used in the one pigment impaired the quality of production of the next pigment. A yet more comprehensive cleaning procedure did not come into question as this would have involved prohibitive expense and time commitment. Accordingly, a decision was taken to build new separate tubing for the different intermediate products. This was immediately successful. The time taken to switch products could even be reduced by three days and cleaning expenses fell significantly. On the very first day after the improvement was made, there were no more problems with color characteristics and no more substandard product was produced.

Now, smaller batch sizes are profitable and the AZO IV site is now in a position to react more flexibly to short-term client requirements. Findings and results from this project can also be applied to other production lines and other AZO sites.

Optimized water management reduces consumption and costs

Water is used in a whole range of manufacturing processes, either for processing in the production process itself or for cleaning or cooling. The water used, where not recycled, must be carefully purified and cleaned. The less water is required, the better then. Water is, however, to a certain degree irreplaceable, also in washing out pigments. Here, the solvent used in manufacturing is washed out with water. To this end, the water used must be of a certain purity.

It was noted that – despite the use of water of the same quality – water consumption in summer months was always higher. Initially it was thought that water used in summer was of inferior purity. Tests did not confirm this assumption. Water in summer was not less pure, but rather revealed higher electric conductivity at the same purity level. The system therefore automatically used more water than would have been necessary.

Reprogramming the system and installing a device to measure conductivity, allowed the volume of water used for washing to be reduced without any resulting loss in quality. Setting accordingly and after adjustment for fluctuations in water conductivity meant that water consumption could be reduced by 60 % from 250 liters per ton of product to only 100 liters and brought down effluent production by over 50 %.

Further savings potential was discovered in the cooling of hydraulic units. Hydraulic units produce heat through their operation and must therefore be cooled with water. In order to avoid interference from particulates in dirty water, water of a high purity is used. This is channeled to the unit even where it was not in operation and also in the case of low heat production. Improvements were possible here. The control system now monitors the cooling of motors and of hydraulic systems so that water consumption depends only on machine temperature. Consequently the volume of water used was reduced by 85 %.

SAVING A LOT OF WATER – IN SMALL STEPS

60 %
reduction in water consumption

85 %
less industrial water

50 %
less effluent

98 %
less cooling water

Even larger relative savings were found for mechanical seals on drive shafts. Many mechanical seals of agitators are cooled with water, though when the agitators are still, water access points are not automatically shut off. This resulted in unnecessary water use of 1 800 cubic meters per day. After improvement works, automatic valves shut off the cooling water supply during rest phases. New perforated sheets have also been installed to reduce water flow. These measures have reduced water consumption for the units by over 98 %.

One more individual measure resulted in a palpable improvement on site. By changing a separation procedure in the manufacture of a red pigment, subsequent washing of the product with methanol could be avoided. As well as other savings, here too effluent production could be reduced by 64 tons of methanol each year from the company's own preparation of methanol.

The jet makes the difference

Water is one of the most important raw materials in the chemical industry. The potential for optimization and savings is correspondingly high. This is especially true for the cleaning of machinery between the manufacture of different products. Further optimization to cleaning procedures not only saves water, but reduces changeover time, that is »dead time« for a machine. In many areas of pigment manufacture, cleaning is part of everyday business. For instance, in some sites, over 140 different pigments are manufactured on ten machines. Over the course of the past decade, cleaning times have already fallen by half thanks to the many improvement measures and ideas. Now, a solution is sought for a mixing system. This couldn't be cleaned using the techniques used up to now. The whole procedure for adequately cleaning right inside the mixer and of all its components including its coils was therefore very time intensive. Also, manual cleaning by employees working on the open mixer resulted in heavy dust formation as cleaning was commenced.

But here too staff found a solution, namely to introduce a rotating cleaning jet in the mixer. With the rotating jet nozzle, an automatic cleaning process is possible up to the point that cleaning water exits the mixer and is again »clear« – further cleaning by hand in difficult-to-reach areas is only necessary for certain pigment types. This relieves the burden on employees who now need spend less time cleaning, are less exposed to dust and are subject to a much reduced risk of accident.

Also, another problem could be solved in the affected site, namely the programming of automatic cleaning jets on standing mixers. On the installation of cleaning apparatus, working areas of the cleaning installations are fixed and no longer changed. For this reason, in the case of products which are difficult to clean, the upper two to three coils in the mixer are often not rendered completely clean. Optimization of programming now extends the area cleaned. The cleaning jets now move closer to the ceiling of the mixer and strenuous manual follow-up cleaning by employees, who up to now had to reach right into the mixer, no longer has to be carried out. This saves time and above all water – similar to the situation in a dishwasher.

Optimized waste management spares both employees and cost

In the manufacture of pigment preparations at Clariant, a thorough analysis of packaging waste disposal revealed attractive opportunities for improvement. Paper bags, for instance, in which pigments and auxiliary materials were transported, are collected and recycled by a waste disposal firm. Yet the transport of loose, non-pressed bags over several hundred kilometers – such a container would then contain more air than waste sacks – didn't appear to make environmental sense. Plastic sacks in which chemicals were transported were also generally burned by the disposal company.

Whatever happens, waste disposal costs Clariant money, instead of generating it cash in return for the »commodity« bag. The manual preparation and provision of used packaging material is also a considerable time and physical burden on employees. After all, the plastic bags, which are bound into balls, weigh up to 25 kilograms and more. These can't always be dealt with by machine. The cost of disposal on the one hand and the physical burden of preparing packaging for collection on the other – back problems were already the most common cause of illness in this site – were two good reasons to look for an alternative.

Of the several possibilities looked into, a high-tech mobile press container proved the most sensible solution. On the one hand, costs for the disposal of packaging could be reduced by pressing it into high density bundles. Other the other hand, employees were relieved of a considerable time and physical burden as they no longer had to prepare packaging for disposal themselves. Also, the unmixed and ready-pressed card, plastic bags and film can even be sold for considerable sums – an advantage quite apart from the reduction in back pain. A double success then ...

Lower energy consumption **WITH eWATCH**

Optimizes energy utilization and operations at energy-consuming plants

Lowering energy consumption is one of Clariant's most important corporate goals, and not just for business reasons. Conservation of resources ranks at the very top of our list of priorities. This explains not only why Clariant has undertaken so much in recent years, but also why so much has been achieved. Energy efficiency has improved considerably, and energy consumption per product ton has fallen significantly.

The origin of these savings was the Energy 2010 program launched in 2006, which had systematically recorded energy consumption throughout the Group and identified potential for savings. Its success led to the initiation of a more extensive successor program, eWATCH: a monitoring system intended to further optimize operations at energy-consuming plants.

eWATCH is an energy management concept coordinated throughout the entire Group. Following the program's full implementation, it continuously records all energy consumption data and identifies areas that reveal potential for reducing consumption. It also enables staff to continuously optimize machine utilization factors. For example, machines, systems, and plants should be integrated into production planning and processes so that they run only at or near their highest efficiency. Corresponding displays mounted in measuring stations provide real-time visualization of these conditions for operating personnel.

The objective of eWATCH is therefore to achieve greater energy savings through improved coordination of all parameters, while enabling keener assessment of the cost-benefit ratio of investments to energy savings. Lastly, intensified training aims to sharpen employees' awareness of energy consumption and broaden knowledge of cost-saving opportunities.

One essential tool in this regard is the Clariant Energy Intelligence Guide – a guideline for all of the company's plants, which provides concrete information on how each plant can reduce its energy consumption. Reference variables are provided along with almost 400 instructions and tips on specific energy-saving measures. The guide is presented and explained to staff at internal events and training courses. As a result of all of these measures, Clariant succeeded in lowering its specific energy consumption – relative to the produced quantity of goods – by around 15 % between 2007 and 2012.

Significant reduction in energy consumption

Over the past five years, Clariant's energy consumption has declined significantly in absolute figures, from 13.2 million gigajoules in 2007 to 10 million gigajoules in 2012. Less energy was also used in relative terms.

eWATCH

eWATCH is an important factor in enabling Clariant to meet the environmental targets it has set for itself by 2020. The system comprises a number of components:

- Reference benchmark figures for the entire Group allow immediate screen-based visualization of optimum consumption and efficiency in every production and energy-generating unit of Clariant.
- Continuous monitoring by means of regular checks of screen-displayed data as well as in-situ inspections ensure energy-saving measures are implemented correctly, effectively, and efficiently. This, in turn, enables employees to draw conclusions about further potential for improvement.
- Staging »Energy Days« as local, regional, and global events, with presentations and discussion panels, is a particularly effective way of convincing managerial staff of the importance of meaningful savings opportunities.
- Working groups at company locations sensitize employees to energy issues and raise their awareness of the need to save energy. Information is also conveyed about specific measures for saving energy and identifying energy-saving potential.
- By closely linking the operational energy optimization efforts with the Clariant Excellence initiative in the area of production improvements, we can achieve even greater energy savings.

Clariant certified to ISO 50001

Clariant was certified to ISO 50001 for the first time in 2012 at one of its German production units. The International Organization for Standardization (ISO) first published this standard for energy management systems in 2011. By gaining this certification in November 2012, Clariant is now among the fewer than one thousand companies worldwide to have achieved it. The certification also attests to the particular efficiency of Clariant's energy management system. Clariant also benefits from significant associated cost savings and competitive advantages. The certification also further raises employee awareness and improves the company's image overall.

Following on from the first production unit at Gersthofen, each Group location will now be certified to ISO 50001. The energy management system makes an important contribution to the achievement of Clariant's sustainability objectives for 2020. The new certification will also contribute to stricter implementation of energy management at all levels. In addition, an ISO 50001 training program will be devised for all auditors and employees from 2013, for an even more transparent presentation of the specific requirements and to ensure full compliance with ISO 50001 and eWATCH.

CLARIANT'S ENERGY SOURCES m gigajoules (GJ)

	2012[1]	**2012**	2011	2010	2009	2008
Gas	**5.57**	**3.05**	2.91	3.18	3.26	4.48
Electricity	**3.96**	**3.00**	3.04	3.13	3.10	3.71
Steam	**3.10**	**2.88**	3.06	3.34	2.80	3.13
Fuel	**0.99**	**0.52**	0.51	0.57	0.58	0.57
Coal	**1.02**	**0.28**	0.29	0.36	0.40	0.30
Cryogen	**0.13**	**0.13**	0.16	0.15	0.13	0.16
Other (biomass. waste)	**0.90**	**0.90**	0.86	0.78	0.75	0.99
Energy output to third parties	**0.75**	**0.58**	0.53	0.60	0.91	1.43
Total energy consumption	**14.93**	**10.18**	10.29	10.90	10.12	11.91

PRODUCTION

	2012[1]	**2012**	2011	2010	2009	2008
m tons	**4.41**	**2.16**	2.23	2.37	2.13	2.37

[1] incl. Süd-Chemie

AvoidingAccidents@Clariant **CUTS ACCIDENT NUMBERS SIGNIFICANTLY**

Analyses and programs improve employee safety in a sustainable manner

Proper precautionary measures and staff training have been proven to reduce the number of workplace accidents significantly. After all, most workplace accidents are avoidable. Clariant is therefore extremely keen to offer its employees a professional environment in which to work. This includes above all else a high level of safety at the workplace. That is why Clariant launched the AvoidingAccidents@Clariant initiative back in 2007.

Significant long-term reduction in accidents

The original aim was to cut the number of accidents that caused at least one day of absence in relation to the Group's 200 000 working hours – the Lost Time Accident Rate (LTAR) – to under 0.80 by 2010. By cutting the LTAR to 0.45, the Group not only met its goal, it undercut it significantly. In fiscal 2012 the overall LTAR was at 0.33, although the values were notably different in the individual divisions.

This is partly because of the different products that employees are working on, and partly because the various manufacturing processes entail very different potential risks. For example, the takeover of Süd-Chemie added two particularly hazardous Business Units. As a result, the lowest ever LTAR level of 0.28, recorded in 2011, could not be matched the following year.

In a pilot study at Indian plants last year, Clariant recorded the accident rates and down-time among not only its own employees, but also those of temporary external staff. The data shows that external staff were not involved in more accidents than our internal workforce in 2012. Indeed there was no appreciable difference between the two groups of workers. This recording of accident data is to be extended to the entire Group from 2013 onwards.

The improvements already achieved in the number of accidents as well as the extremely low overall figure are a testament to the success of the extensive and ongoing accident-prevention measures. Nevertheless, employees will have to continue to be aware of what constitutes safe behavior at the workplace. Indeed this must be reinforced constantly so that better and better safety levels can be achieved. Clariant's experiences have shown that a decisive factor in this is that line managers consistently act as role models with regard to the safety culture, and that they motivate their staff. See p. 116 – 117 (Accident figures)

Excellent position within the sector

These results also put Clariant in an exemplary position within the sector. Having significantly reduced its accident numbers over several years, Clariant remains considerably below the average in terms of accident numbers among companies within the European chemicals industry. In order to become even better, Clariant is working on further developing a Group-wide »safety culture«. The ultimate aim is to have no accidents whatsoever. To ensure that managers work hard to achieve this goal, Clariant has made the LTAR value a factor in calculating bonuses.

This last year, the most common injuries were to hands and arms, at more than 40 % of the total, with foot and leg injuries accounting for a further 30 %. About 20 % of all the injuries were to the body, while head and eye injuries made up 5 % each. More than 40 % of all injuries were sprains, bruises or contusions. Broken bones made up 16 % of the total, open wounds another 15 %, while 8 % of cases involved internal injuries. Chemical and heat burns each represented 7 % of all the accidents. Two cases led to the loss of part of a finger.

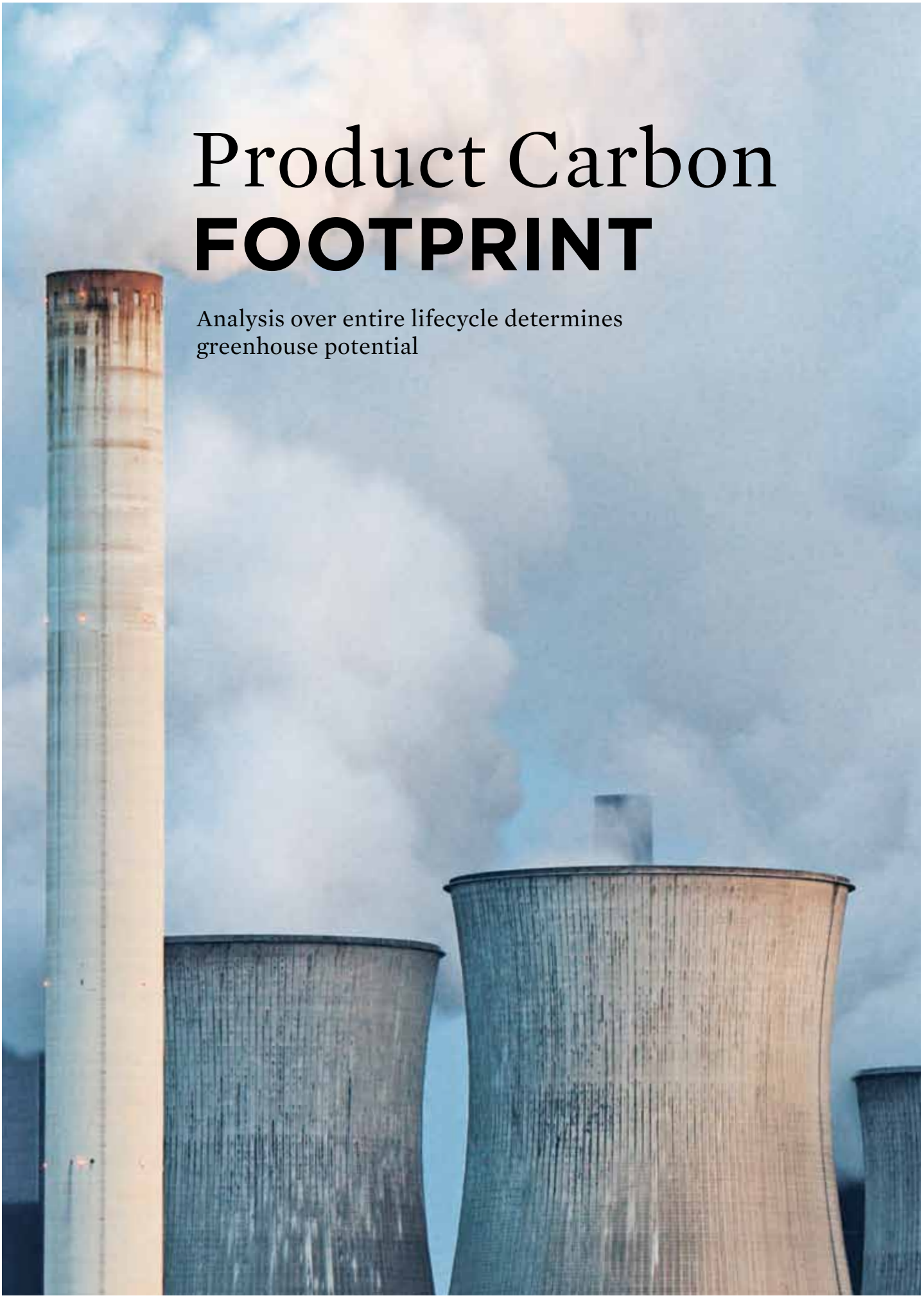
AvoidingAccidents@Clariant has led to a distinct Group-wide safety culture. The relevant measures that have been introduced have proven successful, and are constantly being improved and put into practice. The latest is the recording of not only accidents, but also all near-accidents. It is hoped that this will enable us to draw conclusions about previously unheeded potential risks. To this end, appropriate measures are being developed to lower and avoid these risks. This is likely to again cut the number of actual accidents significantly in the future.

Measures and methods for increasing safety

Embedded in various internal guidelines, the following help increase safety at Clariant:

- Analyses of accidents and near-accidents as well as measures to avoid such accidents in the future
- Regular inspections of the Business Units by health and safety officers, in part together with regulatory officials
- Advice for plants on all aspects of industrial safety, provided by industrial safety experts
- Industrial safety instructions for all employees, provided by line managers
- Holding »safety talks«
- Drawing up threat analyses in accordance with occupational health and safety laws
- Checking machines and new equipment from an industrial safety perspective
- Taking measurements at the workplace, and carrying out workplace analyses
- Regular internal as well as external training courses for employees, provided by operational and specialist divisions

Every month, »learning lessons« are published on the basis of accidents and near-accidents that have occurred within the company. These learning lessons help us to communicate the experience gained from accidents and near-accidents, correct certain practices and behaviors where necessary, and have a preventative effect on the entire company. Locations that use the same equipment and processes can therefore benefit immediately from proactive safety precautions, and therefore prevent accidents and incidents from being repeated.



Product Carbon **FOOTPRINT**

Analysis over entire lifecycle determines greenhouse potential

Climate change caused primarily by greenhouse gases such as CO_2, methane and nitrous oxide is having an ever greater impact on the environment, society and the economy. In this connection, the term »product carbon footprint« has grown increasingly in significance over recent years as it provides a measure of the environmental impact of everyday products and services. The product carbon footprint is indicated in CO_2 equivalent units (impact of gases on the atmosphere calculated as an equivalent of carbon dioxide), that is in kilograms of CO_2 per kilogram of product (kg CO_2 / kg of product). A product weighing ten kilograms, whose production resulted in 500 kg of CO_2 emissions would therefore have a footprint of 50.

In order to determine a product's carbon footprint, Clariant analyzes the product with respect to greenhouse gas emissions at all levels of processing and along the entire chain of production, including all intermediate products and materials, before translating this to CO_2 equivalent units. This includes the product carbon footprint of all materials which are bought in and used at any stage along the value chain, also taking account of the energy used in production (steam, hot water, electricity) as well as cooling water, waste water and other waste produced in connection with production, and finally also packaging and transport.

All this data must be evaluated individually in terms of CO_2 emissions. This process is generally very time-consuming and cost intensive. Clariant makes this investment for selected own products because, firstly, it provides an opportunity to identify ways to reduce greenhouse gas emissions and secondly, it satisfies demands from clients who want to calculate the product carbon footprint of their own products. The product carbon footprint is still in the development phase as there is currently no global ISO standard in accordance with which the footprint is determined. There is also difficulty in the availability of data and uncertainty in the reliability of certain calculation procedures. Nevertheless, despite these difficulties, Clariant supports specific client wishes for product carbon footprint calculations in accordance with the future standard ISO 14067 where these are meaningful.

PRODUCT CARBON FOOTPRINT

kg CO_2 / kg product

Example: A product weighing ten kilograms that requires 500 kg of CO_2 emissions to produce has a footprint of 50.

System to prevent **OPERATIONAL DISRUPTIONS**

Early identification of sources of error and disruption improves prevention

The safety of people and the environment is the highest priority for chemical companies. One indispensable factor is an effective safety management system that can also identify, assess, and control risks in the production process using appropriate measures, so as to lower or even entirely avoid these risks. For this reason, Clariant, in close cooperation with the European Process Safety Centre (EPSC), has actively supported the development of a simple and representative measurement system, also with the aim of establishing an industry-wide standard.

Under the improved approach, incidents during plant operations which could lead to a substance or energy release are systematically recorded. In this way, the effectiveness of process and plant safety can be evaluated with the help of the resulting figures. Clariant tested the reporting of these process safety incidents (PSI) in 2010 with a pilot, and rolled it out company-wide in 2011.

Clariant is now developing this system further, since certain disruptions and breakdowns during operational processes largely have the same underlying causes. To eliminate this, Clariant has introduced a system to record accidents and in particular near misses in order to analyze the data and subsequently draw conclusions regarding potential sources of error. The necessary corrections and preventive measures are then taken to further reduce the likelihood of disruptions to process safety.

The process safety incident rate increased from 0.31 to 0.40 per 200 000 working hours in 2012. Like the lost-time accident rate (LTAR), this rate is calculated from the number of reported incidents in relation to the annual working hours. It was possible to retain the vast majority of substances released during these incidents using the appropriate preventer mechanisms and in production buildings. Knowledge from evaluating occupational accidents can also be carried over to the PSI; the majority of incidents can be traced back to human error or organizational shortcomings.

Recording PSIs has become an integral part of Group reporting. Analysis of the PSIs and the knowledge gained from this should lead to suggestions and stimuli for continuous improvements in process safety. For this reason, PSIs are assigned to various operating conditions, such as normal operation, cleaning, or initial operation. The report also states which safety measure that should have prevented the incident did not function properly, for example due to faulty sealing, poor maintenance, or even human error.

PROCESS SAFETY EVENT RATE

0.40

The process safety incident rate rose from 0.31 to 0.40 per 200 000 working hours in 2012.

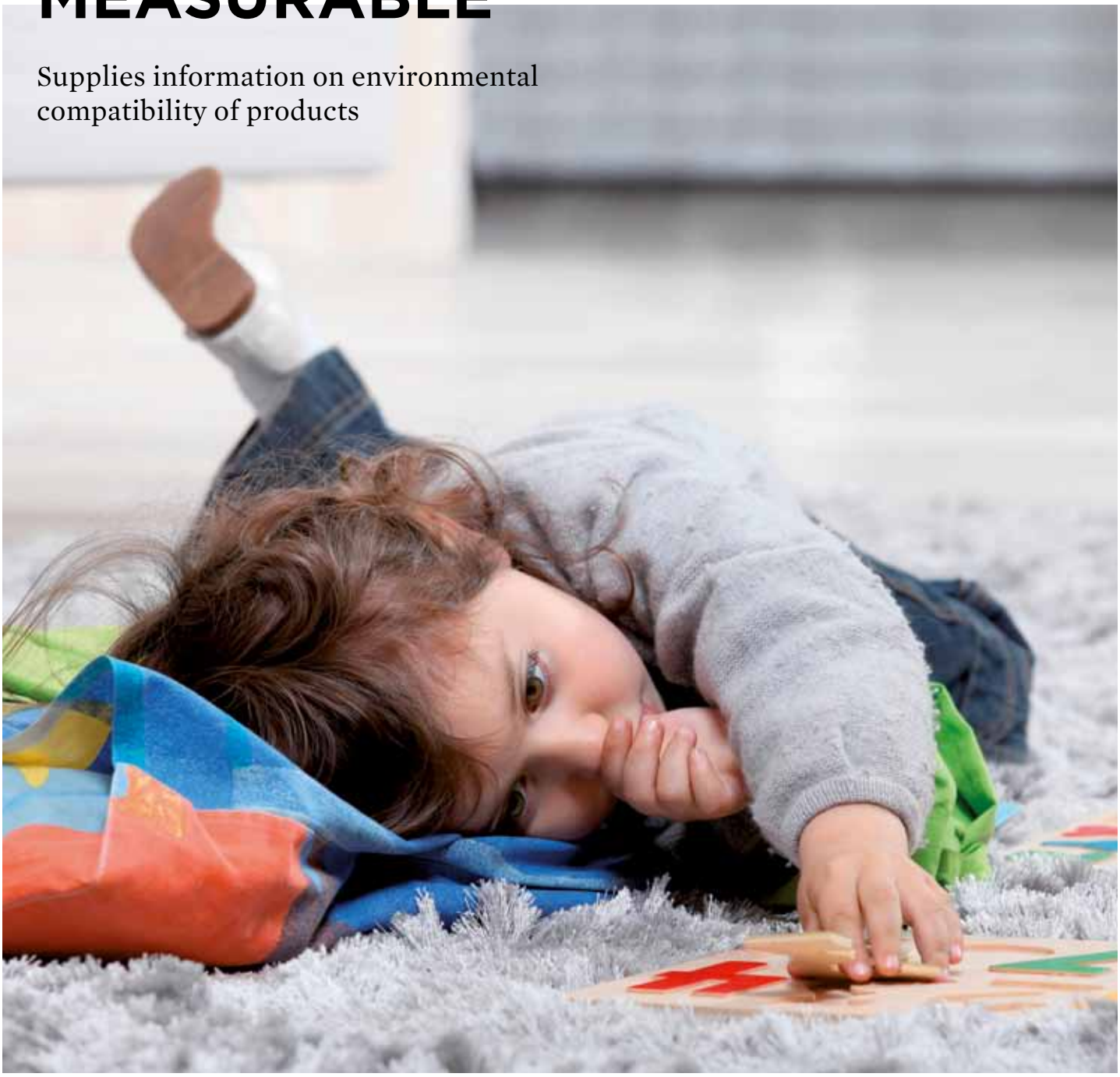
Most incidents are the result of human error or poor organization.

Incidents are reported according to the relevant process type, i. e. normal production, in-plant transport, maintenance/repair measures, start-up/shutdown of a machine, cleaning, or inspection/test operation. The disruption type differentiates between various categories, including leaky container, failure of the preventive device, breakdown of a safety system, result of poor maintenance, human error, or organizational failure.

Clariant is now further developing the system by also recording specific factors and operating conditions that have not led to incidents, but which could have resulted in accidents and releases. Using this information on deviations, disruptions, and near misses, conclusions can then be drawn on specific correlating effects and causal chains. As a result, optimized safety and prevention measures can be drafted to eliminate accidents as far as possible.

Clariant ONE WAY
MAKES SUSTAINABILITY MEASURABLE

Supplies information on environmental compatibility of products



Clariant ONE WAY helps material and textile manufacturers, finishing and fashion companies as well as retailers assess the impacts of their decisions regarding certain production processes and products on the environment, use of resources, and the climate based on data and experience. This means that Clariant customers can manufacture and offer textiles that are more ecologically and economically sustainable. The underlying ONE WAY data grid comprises all the relevant factors, calculation parameters, and variables. The assessment criteria comply with the most stringent industry standards. To support customers in achieving their sustainability objectives in a quick and reliable manner, the selection of chemicals and production processes follows a precise system.

The dyes and chemicals recorded in ONE WAY have been tested by Clariant against more than 15 eco-standards and criteria for textiles. This unique collection of data provides rapid access to information about the toxicological and ecological profile of a certain product. Clariant has so far evaluated information and properties of more than 200 products, covering the entire value chain in the textile industry. This also includes textile dyes and textile chemicals from Clariant to cover the information required by customers »from the fiber to the store.«

The development of this tool has a specific background. An estimated six million tons of textile chemicals are used each year. Textile waste occupies nearly 5 % of all landfill space. According to Textile Exchange's 2010 Global Market Report on Sustainable Textiles, the textile industrie accounts for around 20 % of industrial fresh water pollution and uses roughly one trillion kilowatt hours in energy each year – which equates to 10 % of global carbon impact. Adopting a more efficient approach to the products and materials used here means that a great many things can be optimized.

Selection in three steps

Customers can select the most advantageous dyes and chemicals using ONE WAY's three-step process.

01 First, the potential materials (dyes, chemicals) are evaluated using the data in ONE WAY in accordance with internationally accepted environmental and safety standards such as bluesign®, OekoTex®, GOTS or the Joint Roadmap towards Zero Discharge of Hazardous Chemicals, which must be adhered to when using these materials.

02 In the second step, ONE WAY clusters dyes and chemicals based on their impact on the environment. This allows textile manufacturers to narrow their selection of potential products to the process group that best fits their environmental focus, whether this is CO_2 emissions, savings in water or energy, or the amount of waste water generated.

03 In the third step, ONE WAY has a completely novel function which enables products to be selected in accordance with their cost/benefit profile, allowing economic interests to be aligned with ecological interests. This takes into account factors such as water use and effluents, energy consumption and CO_2 emissions, as well as time.

ONE WAY therefore offers companies in the textile industry a sophisticated instrument with precise data, measurements and analyses to compare different products and processes, and thereby achieve savings in resources or CO_2 emissions. ONE WAY displays the economic efficiency of a given production process using parameters such as dyes and chemicals, water, energy, and time. ONE WAY also shows the environmental profile of a given production process using parameters such as chemical oxygen demand (COD), biological oxygen demand (BOD), CO_2 emissions, energy consumption, and water use.

Demography **MANAGEMENT**

Generation in the balance – Motivation for a longer career

DEMOGRAPHY MANAGEMENT PROJECT

5 000

About 5 000 employees are taking part in a pilot project aimed at keeping staff with the company as long as possible and achieving a notable increase in employer appeal.

The demographic trend, especially in industrialized countries, means that companies must think early about attracting qualified staff. This happens, on the one hand, by increasing appeal as an employer and, on the other, by encouraging, developing and supporting staff in order to keep them with the company for as long as possible.

In November 2010, Clariant launched the »Demography Management« project as pilot project at its German sites so as to gain greater understanding of demographic change. The aim of the project is to keep staff with the company as long as possible and to secure a notable increase in employer appeal. The pilot project includes around 5 000 staff and runs until the end of 2012.

Four analysis and action fields

The current program is comprised of four analysis and action fields. In the years 2011 and 2012, Health Management, Employer Appeal and Family & Career will be examined and corresponding solutions implemented. From 2013, 'Workplace of the Future' and 'Knowledge Transfer' between different generations of staff at Clariant will follow. The action field 'Workplace of the Future' will cover both research and production areas as well as sales. In terms of knowledge transfer, Clariant is interested in finding out how knowledge and experience can be passed on from older staff to younger employees with as little loss as possible whilst at the same time avoiding friction caused through demographic changes.

The basis of the project is the exact analysis of employee structure in terms of education, functions and activities, age, health and, in particular, the needs of employees. The supporting Demography Working Group at Clariant in Germany is comprised both of employer as well as employee representatives in order to ensure a comprehensive and holistic approach.

Based on findings, concrete programs and initiatives were and will be developed with the help of which notable improvements in the aforementioned fields can be achieved. In this connection, long-time work accounts or models will be discussed which allow a smooth transition from work into retirement. In terms of Health Management, support for sports and health check-ups for staff have are already offered. Advice is also offered on general life risks in both private and professional areas such as childcare and care for relatives.

Positive experience with the current Demography Management

Positive experiences with Demography Management up to now Health Management covers a whole range of services, from regular health check-ups, sports and healthy workspaces all the way to active breaks and massage.

Management of Family & Career covers several points such as Clariant's Family Support Directive, part-time positions, emergency childcare provision, holiday programs for employee's children and comprehensive advice and support services for families – from third-party service providers.

Evolution in this regard comes through interesting opportunities for joining the company, various (further) education offers including study grants and leisure offers for schoolchildren and apprentices as well as school exchange programs for the families of Clariant staff.

In order to be able to support staff through both private and professional crises, Clariant also makes use of a third-party service provider offering necessary support through specially trained personnel.

The need for subsidized childcare at selected locations is also being assessed. The response to the survey in larger locations was positive and provided a representative picture of the current demand from staff with respect to children and family support. As a result, an individual emergency care concept has been compiled and implemented for selected locations. For all other locations, an optimized package of childcare will be compiled by an external service provider.

Clariant will continue its demography program and, where needed, will intensify activities in this field for the benefit of staff.

Research & **DEVELOPMENT**

The Clariant Innovation Center: Plenty of room for new ideas

CLARIANT INNOVATION CENTER

500

employees in an area of about 30 000 m²

Construction of the Clariant Innovation Center (CIC) in Frankfurt-Höchst (Germany) is proceeding according to plan. On 31 August 2012, Clariant celebrated the completion of the outer walls with a traditional topping-out ceremony. The CIC provides Höchst Industrial Park with an ultra-modern research center that will become the hub of Clariant's global research activities. The building is due to be move-in ready in the second half of 2013. The approximately 30 000 sqm Innovation Center will provide some 500 employees with the necessary space to expand on Clariant's innovative strength. In addition to Group R&D and various application development departments of the Business Units, the CIC will also house the Process Development, New Business Development and Intellectual Property Management divisions. Of course it goes without saying that particular emphasis was placed on ensuring that the CIC was built as energy efficiently as possible.

Hands-on environmental protection

The Environment Arena, Switzerland's first environmental center of excellence, was set up in Spreitenbach in the canton of Aargau specifically to better illustrate such efforts in a way that is easily comprehensible. It enables visitors to see and experience sustainable production and environmentally compatible products for themselves. Clariant is the center's sole partner from the chemicals sector. The Arena is a place where visitors can experience and learn about the environment, energy, and sustainability; a place to gather information, learn, and discuss, but also a place that inspires visitors to act responsibly in the use of natural resources.

The interior of the modern technical building comprises over 5 000 sqm of floor space for permanent exhibitions plus a further 5 200 sqm for exhibitions on topical environmental issues. There is room for up to 4 000 visitors. The Arena contains 25 hands-on exhibitions operated in conjunction with 70 partner exhibitors and 20 technical partners in the areas of construction, financing, building technology, energy, housekeeping, nutrition, recycling, and mobility.

In my real LIFE

9 employees – 9 views

Photography Jo Röttger, Text Hans Borchert

ERIC (SHENGDONG) LIAO, 46
GENERAL MANAGER, CLARIANT SITE DAYABAY

Photographed at the traffic junction of the Yan'an Expressway with Chengdu Street, south-west of People's Square in Shanghai – a symbol of urban architecture

Eric Liao is energetic and purposeful. The General Manager of the Clariant plant at Dayabay sums himself up with a quote from Confucius: »Choose a job you love, and you will never have to work a day in your life.« In other words: »Give your all in everything you do, and show your appreciation for your colleagues, customers, friends and family.«

This is the definition of responsible action and it is how Eric lives on a day-to-day basis. He is a »team player and also a motivator« who creates, as he says, »his own unique style«, and he observes that »the result is excellent performance.«

These are the words of a practitioner, but Eric also attended university and obtained a doctorate and teaching qualification in Chemical Engineering in Singapore. The third son of two teachers from Chongqing, he has been working for Clariant since 2010 and is very pleased to see »how our position in a competitive market is strengthening all the time, because after 20 years of rapid economic development in China, it's not just about quantity, but increasingly about quality. Today, good is replacing cheap.«

Eric knows that challenges are there to be overcome, and he is ready to take them on as part of a »global company with headquarters and a long history in Europe«. He believes it is simply a question of values, a culture of communication and trust. These three qualities are important to him, and he keeps them in mind when interacting with the next generation: »Nowadays, young people have a lot of things falling into their laps, whereas we had to fight hard for them.« Things have certainly moved on a long way. What would Eric, who likes to read political books in his free time, most like to hold on to from the past? »The humility of my youth.«

WEI FENG, 33
PRODUCTION SUPERVISOR, CLARIANT PLANT ZHENJIANG

Photographed together with his wife Wei Jialan in the living room of their apartment in Dagang, close to the city of Zhenjiang (population three million) in the Jiangsu province

Wei Feng is reliability personified: a caring family man and conscientious member of staff. The young skilled chemical technician works as a shift manager at the Clariant plant in Zhenjiang, where he is responsible for maintaining product quality and safe, smooth working processes, as well as managing four machine operators. »People place a lot of trust in me,« he says, »and I don't take that for granted – it spurs me on and makes me feel very proud.«

The son of a rice grower, he believes it is very important that job performance and personal qualities are valued, and he considers himself lucky to be part of the Clariant family: Clariant is »a global company with an excellent reputation in my country.«

The number 015 on his work clothing indicates that he was one of the first staff members at the Zhenjiang plant. He began working there in 2008 and quickly qualified for a promotion, much to the delight of his parents and wife Jialan. They all live together in one apartment, as is the norm in China. Eight-year-old daughter Keyi is the center of attention and the apple of the family's eye, and her development is the main consideration when they think about the future. The hope is that she will go on to »higher education, and if possible to university.«

Of course, the family also has other dreams. Maybe a car one day, to replace the Lifan motorbike, or a holiday, not necessarily to a far-flung foreign destination, but perhaps to the capital Beijing. And then there's the new flat with more space so that Wei Feng's daughter can have her own room – at the moment she still shares a bed with her parents. As Wei Feng says, »That's really all we need to be happy.«


蜂花
洗发露 护发素

DAVID (MENGQI) DAI, 36
HEAD OF ESHA & PRODUCT STEWARDSHIP, GREATER CHINA

Photographed in the Shanghai Metro on his morning journey to work at the Clariant Chinese headquarters in the Changning District

David Dai, who is responsible for Environment, Safety and Health at all Clariant production sites in the Greater China region, is calm and collected at all times. These distinctive qualities are much in demand, because keeping a clear, cool head is essential in order to properly understand an issue, keep sight of the big picture, carry out thorough analysis and find sustainable solutions to problems. This is no problem for David. His father was an accountant, so precise, meticulous organizational skills are almost in his blood.

A graduate in Applied Chemistry from Shanghai's elite university, he believes that »Sustainability is very important for our company. We only need to look back at history to see what serious consequences slight irregularities in production processes can have, even for large companies.« This is his key message when running staff training courses and safety training sessions: »If someone lacks concentration or is careless in their work, they don't just endanger the product and their company's reputation: they also have a direct impact on their environment and their own job.«

David is not afraid of getting his hands dirty. In the laboratory and in production, he has worked his way up from the grassroots and obtained further qualifications, and he already has a wealth of experience at a young age. He has been working for Clariant for almost two years and it does not sound like an exaggeration when he says that: »Our products and technology are the very best in the world and I also like the corporate culture.«

He also finds room for life outside work, spending time with his four-year-old son or developing his passion for photography and travel. Where does he like to go? »To places with natural landscapes, where I can enjoy the peace and quiet.«

TRACY (YUHONG) ZHAO, 40
PRODUCT STEWARDSHIP MANAGER, GREATER CHINA

Photographed on her arrival from Tianjin at Shanghai's modern domestic airport, Hongqiao

Tracy Zhao is cheerful and open-minded. She has found her place in the world and her inner contentment is reflected in her beaming smile. »Clariant has given me lots of opportunities to learn new skills and acquire very specialized knowledge beyond my textile chemistry studies,« she says. »I relish making a contribution and having plenty of freedom to shape my own career.«

Tracy has been working at the Clariant plant in Tianjin since 2001, and has wide-ranging responsibilities, including product registration, defining production standards – with a focus on Responsible Care und Sustainability – and certifying and approving these standards.

»For me, sustainability is relevant to every area of life,« says the mother of one daughter, »whether in manufacturing, sales, the use and disposal of our specialty chemicals or in my personal life. Ultimately, my family's welfare is just as dependent on a responsibly structured, healthy and safe environment as the operations in our plant.«

Tracy was born in modest circumstances near the city of Xi'an. She remembers: »Our everyday life was very hard. My village didn't have any running water or electricity. I did my school work by candlelight and only really understood how big the world is when I qualified to attend college and university.«

For that reason, gratitude is one of her watchwords: gratitude for her parents' sacrifices, which enabled her to become independent, and gratitude for the broadening of her own horizons: »These are gifts that I would like to pass on to my child.«

PER SJOEBERG, 47
REGIONAL HEAD, GREATER CHINA

Photographed on the famous waterfront area »The Bund«, which extends for 2.6 kilometers along the Huangpu River opposite Shanghai's new Pudong district.

Per Sjoeberg, Clariant's Regional Head for Greater China based in Shanghai, is both a witness to history and one of the driving forces behind this turbulent phase of development. For three years he has been experiencing the unstoppable wave of growth, progress and modernization that has been sweeping over China. »You can almost feel it physically,« he says.

He thinks about this every morning on his journey to work: »So much activity, so much desire and ambition, so many people. They all need energy, clean air, clean water, and healthy food, and that means we need stable processes with lasting value. People in China also understand that we need to protect the environment and as a global company we can and want to help achieve this goal by contributing our standards, our experience and our corporate culture founded on Sustainability and Responsible Care.«

Per is responsible for around 2 000 employees, and he sees them as catalysts for this gradually dawning awareness. His focus is on helping individuals progress and gain more qualifications, and on developing young talent and generally fostering a working environment founded on mutual and cultural understanding, openness and personal responsibility.

»People are possibly the most fascinating aspect of what is a very interesting job,« he says. He represents Clariant at the Association of International Chemical Manufacturers (AICM), and his hectic everyday life teaches him the value of time, that most precious of all commodities. Whenever possible he spends it with his family – his wife and two children – and playing his favorite sport, golf. The Sjoebergs feel at home in China: it is, as they say, »a fantastic country«.


商 点

MAX (MIN) GAO, 25
MANAGEMENT TRAINEE, ASIA PACIFIC

Photographed at the High Point billiards club, one of the most popular hang-outs for young people in Shanghai

Max Gao is highly qualified and ambitious. This is a young man who reflects the next generation in China: well educated, internationally focused, flexible, and determined. »I was impressed by the Clariant management trainee program when it was presented at Campus Talk at Shanghai University. I applied for the program, and was thrilled to be awarded one of the sought-after places after in-depth interviews.«

The two-year program will see Max experiencing the practical side of working life, with stints in sales, marketing and communications. It's all new territory for Max, who completed his Masters in Chemical Engineering at Delft University and must now gain expertise in completely new areas. Articulate, independent and competent, he believes that the time he spent in the Netherlands helped him a great deal. »It taught me to take responsibility for my own actions and organize my life for myself.«

Orientation is the buzzword: »The trainee program gives me an unusually broad overview of the company, from products to processes and future objectives to company history. No day is exactly like another and I can definitely imagine myself working in this multicultural, global group environment for a long time to come.«

His first priority now when he gets home in the evening is to tell his wife all about his experiences. They met at Delft University and married at the end of 2012. »I'd like to think that we have a modern marriage based on equality, unlike my parents' generation. We both work, we each focus on our own jobs, and we have many hobbies in common. There's only one thing I like to do alone, and that's playing football for the Clariant staff team.«

MARGARET (RONGHUA) SOONG, 50
HEAD OF RESPONSIBLE CARE, GREATER CHINA
SALES HEAD OF BUSINESS UNIT EMULSIONS, DETERGENTS & INTERMEDIATES, GREATER CHINA

Photographed on a visit to the Buddhist Jing'an (»peace and quiet«) temple, one of the many famous ancient temples in China, near to Shanghai's Nanking Road.

Shanghai born and bred, Margaret Soong is open-minded and charismatic, and a born salesperson. The daughter of a factory manager, she was born in Shanghai, completed her studies (Bachelors in Chemical Engineering, Master of Business, MBA) and gave birth to her daughter here and is now based in Shanghai in her role at Clariant, where she has worked since 2011. »Finally!« she says. »I waited a long time for this opportunity, because our company enjoys an excellent reputation across the world as a manufacturer of specialty chemicals.«

The new era suits Margaret down to the ground, and she takes every opportunity that comes her way to shape her own destiny. She laughs infectiously: »We are completely focused on business here – that's how we identify ourselves. And I'm the last person who would miss a good business opportunity.«

Not at any price, though – that is very important to her. »My motto is balance. Balance is the best solution to everything, whether interacting with colleagues or with clients. It's important to establish harmonious communication on the basis of mutual respect. The product and quality also need to be right, as do the logistics. In short: individuals cannot determine how good and successful they really are; the whole is greater than the sum of its parts.«

Margaret is known for always giving 100 %, and for her cheerful approach and feminine perspective. Faith is important to her (»There are powers greater than us«), as is her feminine identity. She says that equality between men and women is still a long way off in China, despite the saying: »There is one heaven and only half of its residents are men.«

LISA (YUE) ZHANG, 29
ASSISTANT TECHNICAL MANAGER, BUSINESS UNIT PIGMENTS, SHANGHAI

Photographed in the exhibition rooms of the China Pavilion at the Shanghai EXPO 2010 site

Lisa Zhang brims with energy and enthusiasm. The fresh young face of the Pigment Clariant Business Unit in Shanghai says she would prefer it if there were more than 24 hours in a day and no breaks. »My main interest is in understanding how different things react with one another. So the chemistry is right, both at work and in my private life.«

She obtained a Bachelor of Engineering in plastics engineering (high polymers) from the University of Tianjin, her home town, which was her springboard into working life and also a ticket to the vibrant metropolis of Shanghai on the Huangpu River with its 23 million inhabitants. Lisa describes herself as a typical young Chinese woman: she is unattached, lives alone, wants to progress in her career and has made learning her uppermost priority in life.

As well as her varied day-to-day work in Clariant's technical marketing department, she is taking a business administration correspondence course, which she hopes to complete in two years, and attends courses at the Japanese language school and a weekly dance class – just for a bit of fun.

»Unlike my mother, who was traditional and mainly focused on me, her only daughter, I'm trying to make the most of my abilities,« says Lisa. To be able to do that is a privilege of my generation and I consider myself very lucky.«

One of her hobbies is producing oil paintings that reflect her spirit and sense of self-fulfillment. Bold in composition, they catch the eye with their luminosity and idiosyncratic brush strokes. »Whether I'm at work or enjoying my free time,« she says with a smile, »my life is always colorful.«

COCO (HUI) YANG, 34
HEAD OF COMMUNICATIONS, ASIA PACIFIC

Photographed at a business lunch in Shanghai's famous Yuyuan Garden, a place of contentment and peace

Coco Yang is competent, charming and highly professional. The Head of Clariant Communications for the Asia Pacific region is often called »the German« by her colleagues because of her highly disciplined, hard-working and responsible nature. »You could probably also add tidy and efficient to that list,« she laughs, »but honestly – I'm Chinese born and bred and I'm only doing my job.«

So, thanks for the compliment, but let's get back to work. There's certainly a lot to do. She is responsible for issuing internal and external communications about any issue affecting the company. In addition, she organizes and represents Clariant at numerous trade fairs and ensures that the right tone is always struck when anything needs to be said or communicated, whether in English, German or her native language. »I live and breathe open dialog,« she says. Coco completed a Masters degree in Media Studies, English Literature Studies and Chinese Studies at the University of Trier, Germany, and has had a strong affinity with Europe ever since.

The only daughter of a stage lighting technician, she likes to describe herself as a child of the Chinese »cross-over generation« that is transitioning from the traditional to the modern, and whose members are privileged »to be able to experience both worlds: the modesty of the old and the self-confidence of the new era.« Her watchwords are »humility and dedication, honesty and integrity.«

Coco loves to read historical kung fu (wuxia) novels by author Jin Yong, and is also interested in how economic progress benefits individuals and society as a whole. »I learnt a lot about that during my years in Germany. Today, I appreciate the value of our own history,« she says with a smile. »I've also overcome my fear of losing face, so I'm open to criticism but I can also say no.«

在我的现实生活中

GRI Content
REPORT ON SUSTAINABLE MANAGEMENT IN 2012

Report on sustainable **MANAGEMENT IN 2012**

I. Clariant: An attractive portfolio of international activities

Clariant is a leading worldwide specialty chemicals company offering innovative and sustainable solutions to customers in a wide variety of markets. Meanwhile, Clariant's research and development is directed toward the major challenges of our time. Among these are energy efficiency, renewable raw materials, efficient mobility, and the maintenance of resources.

FOCUS ON SUSTAINABLE GROWTH

Clariant pursues active portfolio management in order to increase profitability and add value. Expansion through acquisitions supports the growth of Business Units. Implementing the strategic targets will make the Clariant Group's corporate structure more sustainable and drive changes going forward.

By the end of 2012, Clariant's innovative and customized products and solutions were being produced by 11 Business Units. With the initiated divestiture of the emulsions, paper specialties and textile chemicals units, Clariant was able to conclude a transaction with a total sales volume of around CHF 1.2 billion faster than anticipated. The options concerning Detergents and Intermediates (D&I) as well as Leather Services should be implemented by the end of 2013.

In 2011 Clariant took over Süd-Chemie AG, thereby acquiring two attractive high-margin businesses. In 2012 our new Business Units Catalysis & Energy and Functional Materials posted EBITDA returns of 21.4 % and 14.7 %, respectively*. They also have an excellent track record in future technologies and innovations. The businesses of the former Süd-Chemie were consolidated for the first time on the basis of a full fiscal year in 2012.

*See page 44, Annual Report 2012

KEY FIGURES CHF m

	2012	2011[2]	2011	2010	2009	2008
Group sales[1]	**6038**	5571	7370	7120	6614	8071
EBITDA before Exceptionals	**802**	835	975	901	495	783
EBITDA	**675**	643	786	646	263	691
Personnel expenses	**1452**	1341	1623	1646	1757	1759
R&D investments	**175**	140	176	135	150	184
Financial result	**–150**	–140	–173	–123	–101	–138
Liquid funds	**1372**	1199	1199	716	1140	356
Distribution per share (in CHF)	**0.33[4]**	–	0.30[3]	0	0	0.25
Total assets	**9525**	9105	9081	5921	6092	5946
Equity	**3040**	3026	3026	1806	1896	1987
Equity ratio (%)	**31.9**	33.3	33.3	30.5	31.1	33.4
Employees	**21202**	22149	22149	16176	17536	20102

[1] including trading

[2] continuing operations

[3] Payout as a reduction of the par value

[4] Payout from capital contribution reserves

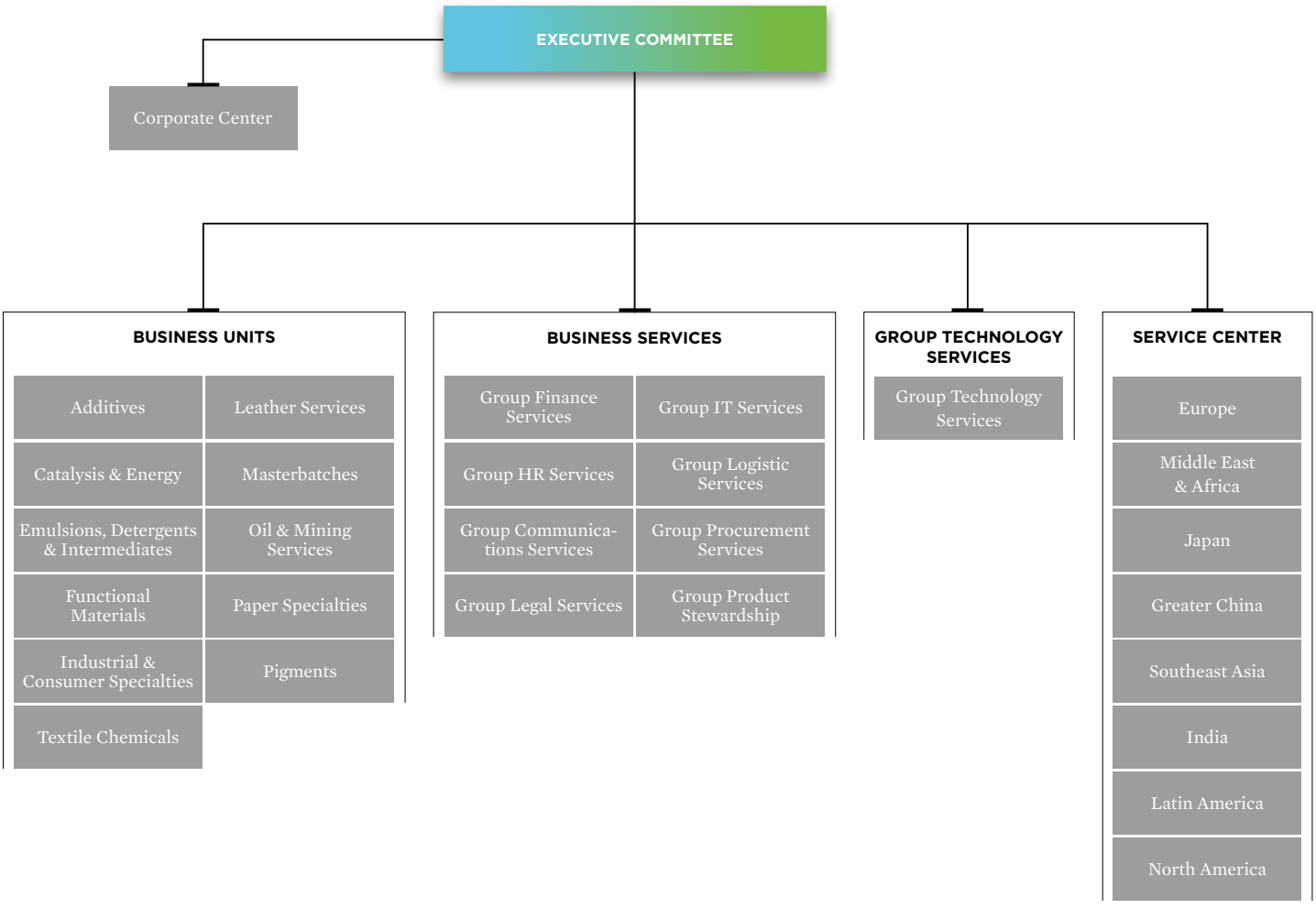
EMPLOYEE BENEFITS AT CLARIANT CHF m

	2012	2011	2010	2009	2008	2007	2006
Pension provisions (employee retirement plan obligations)	**498**	538	443	484	478	515	495

SALES BY REGION CHF m

	2012	2011	2010	2009	2008	2007	2006
EMEA (Europe, Middle East, Africa)	**2765**	3671	3529	3334	4313	4616	4333
North America	**956**	958	860	792	994	1102	1143
Latin America	**903**	1144	1199	1138	1261	1262	1149
Asia / Pacific	**1414**	1597	1532	1350	1503	1553	1475

ORGANIZATIONAL STRUCTURE of Clariant



The above organizational structure includes the Corporate Center as well as the Business Units, Business Services, Group Technology Services and Service Centers. The Corporate Center incorporates the Controlling, Accounting, Treasury, Tax, HR, Legal, Business Development, Group Communications & Investor Relations and CSRA (Corporate Sustainability & Regulatory Affairs) functions, among others.

COMPANY STRUCTURE TO CHANGE

Active portfolio management plays a key role in our company's path to sustainable profitability. In this context, Clariant has examined strategic options for the Textile Chemicals, Paper Specialties and Emulsions, Detergents & Intermediates (D&I) and Leather Services Business Units in 2012. Clariant has been able to report initial transactions more quickly than expected at a total sales volume of approximately CHF 1.2 billion with the initiated sale of Emulsions, Paper Specialties and Textile Chemicals. The remaining options are planned to be implemented by the end of 2013.

CONTINUING ACTIVITIES

KEY FIGURES 2012	
Sales (in CHF m)	6 038
EBITDA before exceptionals (in CHF m)	802
EBITDA margin before exceptionals (in %)	13.3

Additives*

Clariant's Business Unit Additives is a major supplier of products for functional effects in plastics, coatings, printing inks and specialized applications such as hot melt Adhesives. **Key Products:** Flame retardants: Exolit®; Polymer additives: Hostavin®, Hostanox® Hostastat®, Nylostab®; Waxes: Ceridust®, Licocene®, Licowax®, Licolub®, Licomont®
www.additives.clariant.com

Catalysis & Energy

One of the leading global catalyst suppliers with a broad portfolio of products for many chemicals and fuels processes, including those that enable the use of alternative raw materials, such as natural gas, coal, and biomass. **Key Products:** Catalysts for the production of ammonia, methanol, hydrogen, and synthetic natural gas, and for use in various alternative fuels production processes including gas-to-liquid (GTL) coal-to-liquid (CTL) and biomass-to-liquid (BTL); Petrochemical catalysts for the production and purification of olefins and derivatives, aromatics and derivatives, and for the growing market of on-purpose production of propylene; Oxidation and hydrogenation catalysts for production of many basic and specialty chemicals; Catalysts for purifying industrial off-gas and removing pollutants from combustion engines; Upgrading and purification catalysts for refinery processes, including hydrogen production, and isomerization and dewaxing to enhance the performance of gasoline and diesel.
www.catalysis-energy.clariant.com

* Additives, the remaining part of the former Performance Chemicals, also comprises the activities of Emulsions in Morocco and the New Business Development with combined sales of around CHF 20 million.

Functional Materials

This Business Unit is among the market leaders in specialty products and solutions for improving product and efficiency characteristics in various industries including adsorbents, solutions for protective packaging, and water treatment. **Key Products:** Various bleaching earths and bentonite products for foundry, detergents, ceramics, papers, civil engineering and feed additives; Hydrotalcite; Tubes, stoppers, packets, desiccant bags, humidity indicator cards, etc.; Water treatment chemicals and equipment.
www.functionalmaterials.clariant.com

Industrial & Consumer Specialties

The Industrial & Consumer Specialties Business Unit is one of the largest providers of specialty chemicals and application solutions for consumer care markets such as personal care, home care and crop protection and industrial application markets including industrial lubricants, paint & coatings and deicing for aviation. Its EcoTain® label exemplifies its uncompromising pursuit of the principle of environmental sustainability. **Key trade marks:** Aristoflex® Rheology modifiers that simplify the manufacture of attractive personal care products; Vitipure® An easy-to-formulate bio-based polymer with no influence on the visual and olfactory characteristics of the formulation; Hostapon® Mild surfactants for all skin care formulations; Synergen® Efficient, performance enhancing adjuvants for crop protection formulations; Dispersogen® High performance polymeric and surfactant-based dispersing agents for paints and crop formulations; Emulsogen® and Genapol® High-quality emulsifiers for formulations in consumer care and industrial applications.
www.ics.clariant.com

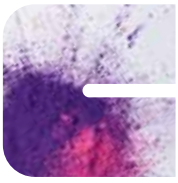
Masterbatches

Clariant Masterbatches is a leading manufacturer of color and additive concentrates and technical compounds for the plastics industry, and supplies the packaging, consumer goods, medical, textile and automotive industries. **Key Products:** Remafin® Masterbatches, liquids, and specialty compounds for olefins; Renol® Masterbatches, liquids, and specialty compounds for non-olefins; Cesa® Standard and specialty additive Masterbatches; Hydrocerol® Chemical foaming agents; Mevopur® Dedicated Masterbatches and compounds for the medical and pharmaceutical sector; Enigma® Special effects; Omnicolor® Multipurpose Masterbatches.
www.masterbatches.clariant.com

Oil & Mining Services

The Oil and Mining Services Business Unit is one of the most significant providers of products and services to the oil, refinery and mining industries. Its broad and diverse product range includes chemical solutions for the oil, gas and refinery industries, plus mining flotation chemicals and emulsifiers for explosives. **Key Products:** Oil Services: SURFTREAT®, PHASETREAT®, CORRTREAT®; Mining: FLOTIGAM®, ARKOMON®, FERTALA®; Refinery Services: SCAVTREAT®, DODIFLOW®, DODIWAX®.
www.oil.clariant.com, www.mining.clariant.com, www.refinery.clariant.com

Pigments



The Pigments Business Unit is a leading global provider of organic pigments, pigment preparations and dyes that are used for coatings, printing, plastics and other special applications. **Key Products:** Pigments: Hostaperm®, Novoperm®, Hansa®, PV Fast®, Graphtol®; Pigment preparations: Colanyl®, Hostatint®, Hostajet®, Permajet®, Hostaprint®, Hostasin®; Dyes: Duasyn®, Savinyl®; Other products: Easily dispersible pigments from the Hostaperm® and Novoperm® ranges, Integrated Tinting System.
www.pigments.clariant.com

DISCONTINUED OPERATIONS

KEY FIGURES 2012	
Sales (in CHF m)	1744
EBITDA before exceptionals (in CHF m)	132
EBITDA margin before exceptionals (in %)	7.6

Emulsions, Detergents & Intermediates

The Emulsions, Detergents & Intermediates Business Unit is one of the most important producers of key raw materials for detergents and household cleaners and for the manufacture of agrochemicals and pharmaceuticals. It also produces water-based emulsions and polymer dispersions for paints, coatings, adhesives and sealants, and serves the textile, leather and paper industries. **Key Products:** Detergents: TAED, SKS®6, Soil, Release Polymer and Paraffin Sulphonate; Intermediates: Glyoxal, Glyoxylic, Acid, Oxalic Acid, Building Blocks; Emulsions: Mowilith®, Mowicoll®, Appretan®, Emucryl®, Printofix®, Melio®, Cartaseal®, Cartacol®, Cartacoat®, VeoVa™, Acrylates, Styrene, and other specialties.
www.detergents-intermediates.clariant.com
www.emulsions.clariant.com

Leather Services

Leather Services is a leading producer of chemicals and services for the leather industry. This Business Unit offers chemical and technical solutions for the complete leather production process, from beamhouse to finishing. **Key Products:** Granofin® Sustainable tanning solutions; Tergotan® New generation of retain and soft polymers for a supple, natural, and relaxed leather; Melioderm® To cover all dyeing needs; Melio® Aquabase value-adding masking of leather defects; Aqualen® High performance, low VOC, NMP-free topcoats.
www.leather.clariant.com

Paper Specialties

Paper Specialties is one of the largest manufacturers of optical brighteners, dyes, functional and process chemicals for use in the production of paper, packaging and tissue. **Key Products:** Cartasol® M Best performance dyes for packaging; Flexonyl® Pigment preparations especially designed for paper applications; Leucophor® Optical brightening agents for innovative whiteness solutions; Cartaspers® PSM Keeping paper machines cleaner, faster, for longer; Cartabond® Crosslinkers for improved offset printing and converting; Cartafix® A broad range of dye fixation solutions.
www.paper.clariant.com

Textile Chemicals

The Textile Chemicals Business Unit is a leading supplier of dyes and chemicals for the textile industry. Brands and mills in the areas of apparel and fashion, automotive, home textiles, and technical textiles turn to us to meet the constantly changing specifications of their respective sector. **Key Products:** Advanced Denim, Drimaren® Reactive dyes for cellulosic colorations, Foron® Disperse dyes for highest Wash- and light-fastness requirements, NanoSphere®* and coldblack®* Innovative finishes for functional effects, Nuva® N The next generation of soil and stain release, Nylosan® Acid dyes for polyamide coloration.
www.textiles.clariant.com

* registered trademarks of Schoeller Technologies AG, Switzerland

II. Shareholder and corporate structure of Clariant

The headquarters of Clariant International Ltd are located at Rothausstrasse 61 in 4132 Muttenz, Switzerland. The company's business operations are conducted through Clariant Group companies. Clariant Ltd, a holding company organized under Swiss law, directly or indirectly owns all Clariant Group companies worldwide. Except as noted below, the shares of these companies are not publicly traded.

Clariant Ltd holds a 63.4 % interest in Clariant Chemicals (India) Ltd based in Thane, India, and a 75 % stake in Clariant (Pakistan) Ltd based in Karachi, Pakistan. In addition, since the entry made on November 30, 2011 of the squeeze out accepted at the Extraordinary General Meeting of Süd-Chemie AG held on November 22, 2011, Clariant Ltd owns 100 % of Süd-Chemie AG, which was acquired on April 21, 2011 and is based in Munich, Germany. An overview of the most important Group companies of Clariant Ltd can be found in the 2012 Clariant Annual Report on page 200.

HIGH PERCENTAGE OF SHARES IN FREE FLOAT

At December 31, 2012, former shareholders of Süd-Chemie AG who had swapped their shares against Clariant shares were holding in total 15.127 % of the share capital of Clariant. These shareholders are affiliated with each other because of family or other reasons (especially the Wamsler, Winterstein, Schweighart and Stockhausen families). In addition, the following shareholders held a participation of 3 % or more of the total share capital: FIL Limited Hamilton (Bermuda), 5.020 %; Teachers Insurance and Annuity Association of America – College Retirement Equity Fund (TIAA-CREF), New York (USA), 3.097 % (2011: 3.097 %); UBS Funds Management (Switzerland) AG, Basel (Switzerland), 3.090 %; Credit Suisse Funds AG, Zurich (Switzerland), 3.280 % (2011: 3.0184 %). No other shareholder was registered as holding 3 % or more of the total share capital. As of 31 December 2011, the following shareholders held a participation of 3 % or more of the total share capital: Fidelity Management & Research, Boston (USA), 5.230 %. No other shareholder was registered as holding 3 % or more of the total share capital.

These percentage figures are based on information received from the respective shareholders.

These transactions, which were reported to the Stock Exchange Disclosure Office pursuant to Art. 20 of the Stock Exchange Act, can be viewed on the SIX Swiss Exchange reporting platform: http://www.six-exchange-regulation.com/obligations/disclosure/major_shareholders_de.html.

As of December 31, 2012, the fully paid nominal share capital of Clariant Ltd totaled CHF 1 094 283 339.80 and was divided into 295 752 254 registered shares, each with a par value of CHF 3.70. Clariant Ltd shares have been listed on the SIX Swiss Exchange since 1995 (symbol: CLN, ISIN no. CH0012142631). Clariant Ltd does not issue non-voting equity securities (Genussscheine). Based on the closing price of the Clariant share of CHF 12.35 on December 31, 2012, the company's market capitalization at year-end amounted to CHF 3 652 million. The company's share capital may be increased by a maximum of CHF 147 995 674 by issue of a corresponding maximum of 39 998 831 registered shares with a par value of CHF 3.70 each. These shares must be paid up in cash, by the exercise of conversion or warrant rights granted to their holders in connection with bonds of the company or one of its subsidiaries. The details are set out in Article 5b of the Articles of Association. You can find the Articles of Association on our website at www.governance.clariant.com. On December 31, 2011, some 36 186 971 of these 39 998 831 shares were allocated to a CHF 300 million senior unsecured convertible bond issued on July 2, 2009. The effects of the nominal value reduction that took place on June 13, 2012 were taken into account in accordance with the conditions of the convertible bond by adjusting the conversion price (from CHF 8.55 to CHF 8.29) and the conversion ratio (from 5 847 953 to 6 031 363),

both valid from June 8, 2012, and the adjustments were published accordingly. The convertible bond maturing on July 7, 2014 has a conversion price of CHF 8.29 and a coupon of 3 % per annum payable semi-annually in arrears.

Each registered share entitles the holder to one vote at the Annual General Meeting. Shareholders have the basic right to payment of dividends and also have other rights under the Swiss Code of Obligations. However, only shareholders entered in the Clariant share register may exercise their voting rights. The rights and options of shareholders are governed by Swiss company law.

All employees may submit requests or recommendations at any time to the company, its management, or the appropriate bodies through their supervisors or managers or in conjunction with the company suggestion system (which may differ from country to country).

INTEGRATION OF ACQUIRED COMPANIES

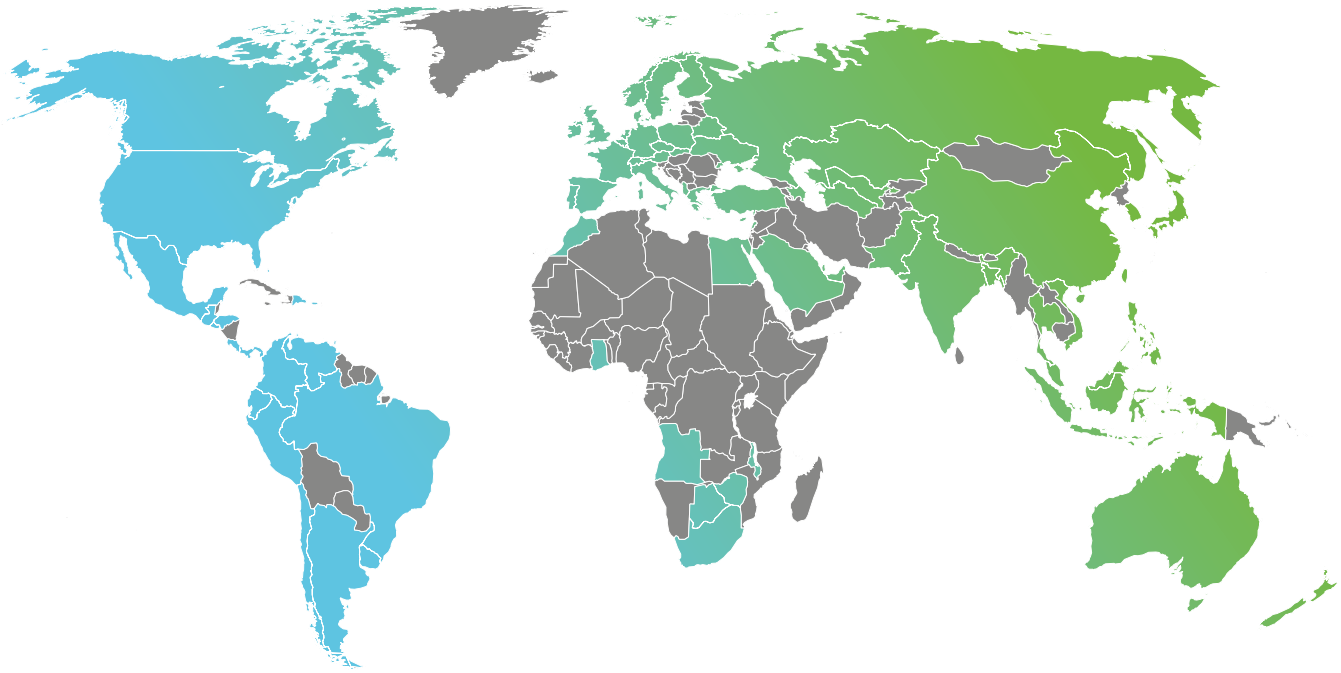
In April 2011 the Clariant Group acquired Süd-Chemie AG, a global and highly innovative specialty chemical company based in Munich, Germany. This acquisition is the largest in the recent history of Clariant, gaining Clariant two stable and profitably growing Business Units, with around 5 200 employees, which are among the global leaders in the areas of process catalysts and adsorbents. In addition, these Business Units have a strong research and development pipeline with significant growth potential. This involves innovative materials for key megatrends such as environmental protection, energy efficiency, energy storage, and renewable energies.

In addition to the acquisition of Süd-Chemie, Clariant also made a number of smaller yet very interesting, future-oriented acquisitions. In 2011 it acquired Octagon Process LLC (US, ICS Business Unit), Prairie Petro-Chem (Canada, OMS), Italtinto (Italy, PIG) and Oberhausen Technology Center GmbH (Germany, ICS). The acquisition of the Brazilian company Tuipi, a small operation of Oxiteno, was the only one made in 2012; however, it is a good indication of Clariant's strategy. One the one hand, Tuipi offers the Catalysis & Energy Business Unit an opportunity to tap the developing Brazilian market and to access the Latin American market from there. On the other hand, the company has interesting, innovative products with the potential for high returns (see Annual Report, p. 74).

INTERNATIONAL BUSINESS ACTIVITIES OF CLARIANT

Clariant's sales markets are located all over the world. In recent years, the level of geographic diversification has increased further with a shift in regional sales shares. As a result of dynamic economic growth in the emerging markets, sales have also increased significantly in these regions when measured against Group sales. This increase was especially pronounced in the sales shares of the Asia/Pacific and Latin American regions. While only 17 % of sales were generated in Asia/Pacific in 2005, this figure increased to 24 % in 2012. The share of Latin America increased from 13 to 16.5 % in the same period. A striking fact is that China now accounts for a much higher percentage of Clariant Group sales. Seven years ago China's share was still comparatively small at 5.4 %, but by 2012 it had already risen to 7.5 %. A corresponding decline occurred in the share of sales from the traditional industrial nations of North America and Europe. Having accounted for a total of 63.4 % in 2005, they had fallen to 50.1 % by 2012.

CLARIANT worldwide



For an overview of countries in which the company is active with (primary) operating facilities, see the Annual Report 2012, pages 200 – 203

III. Awards for sustainable management

In 2012, Clariant was the winner of ICIS Chemical Business Magazine's annual Innovation Award. One of the areas that was distinguished was Advanced Denim technology, an innovative, environmentally friendly process for dyeing jeans (see also »Advanced Denim« on page 28). The process was developed by an expert team in Clariant's Textile Chemicals Business Unit in Castellbisbal, near Barcelona (Spain).

INCREASED SUSTAINABILITY EFFORTS WORLDWIDE

The Oil & Mining Services Business Unit received World Oil Magazine's World Oil Award 2012 for its innovative PHASETREAT products in the category of »Best Production Chemicals.« The award recognizes the development of PHASETREAT products, which are used to effectively separate water from oil in an environmentally friendly manner.

In 2012, Clariant (Thailand) Ltd. was for the first time recognized as a »Good Environmental Governance« company by the Department of Industrial Work and Industrial Estate Authority of Thailand. After numerous audits and security checks, Clariant Indonesia received the renowned »Responsible Care Gold Award 2011« for outstanding management performance in the Tangerang and Cilegon locations.

Zhenjiang MPP in China won three awards for its commitment to safety: the site received two awards for safe production and its status as an exemplary operation in the area of safety from the Zhenjiang New District Administration Committee and another award from the Zhenjiang New District Safety Operation Committee for outstanding achievement by the workplace safety department.

In India, Clariant also received a distinction for occupational safety awarded each year by the National Safety Council. It recognized outstanding achievements in connection with accident prevention and an extremely low number of accidents. In Pakistan Clariant received the »Environmental Excellence Award 2012« from the NFEH (National Forum for Environment and Health), an NGO affiliated with the UNEP (United Nations Environment Programme).

AWARDS AND SUPPORT GRANTED BY CLARIANT

In the reporting year, Clariant and the University of Basel awarded the first »CleanTech Award«. The objective of this initiative is to support young researchers who have made exceptional achievements in the areas of renewable energies, raw material efficiency and environmental protection. Academic research is often a driving force behind innovative technologies. The joint challenge lies in translating new technology concepts into marketable product solutions.

The award is just one of many initiatives through which Clariant establishes ties with young researchers with the goal of promoting a dialog between academic and industrial research and introducing talented young researchers to the company at an early stage in their careers. In 2012, Clariant joined the Sustainable Apparel Coalition (SAC). The SAC is a charitable organization whose members include the US Environmental Protection Agency, non-governmental organizations, textile and shoe manufacturers, retailers, suppliers, and associations who campaign for sustainability standards in the clothing industry (See also page 124).

IV. Comprehensive sustainability communication strategy

The reporting period of this sustainability report comprises January 1 through December 31, 2012 and is therefore identical to the financial year of Clariant. The most recent sustainability information about Clariant was published with the Sustainability Report 2011 in March 2012. Clariant's Sustainability Report is currently published on an annual basis in the quarter following the reporting year.

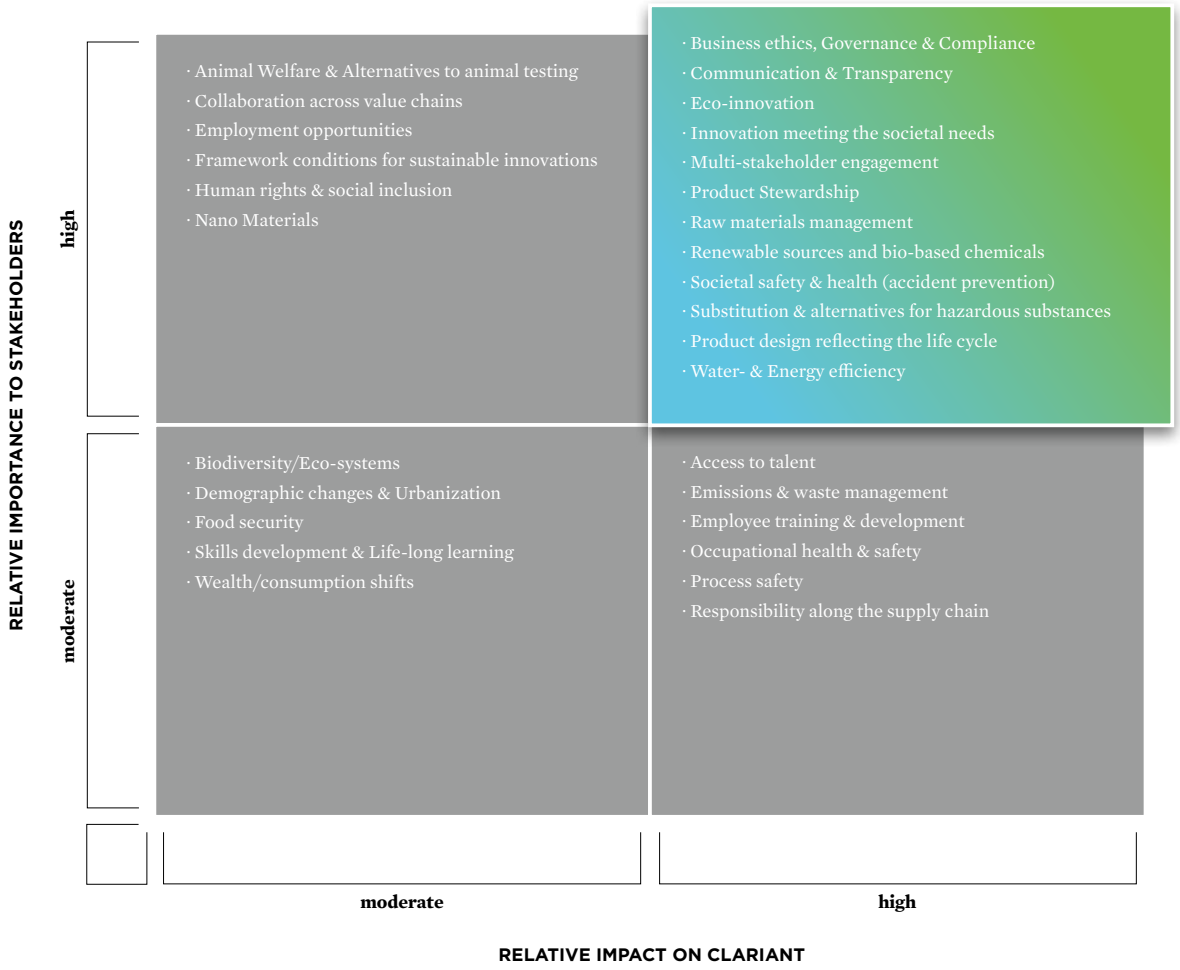
TRANSPARENT AND DETAILED PROVISION OF INFORMATION

Clariant's Sustainability Council determines sustainability issues and areas that are relevant in the respective reporting year or which are significant in view of the company's plans and objectives. The information provided in this report focuses on these topics. The relevant classification is based on the materiality matrix, which is derived from the decisions of the Sustainability Council, updated annually and adapted to the requirements. This matrix represents all areas of activity and analysis that are significant to Clariant at the respective point in time.

As a rule, every area of responsibility within sustainability management is considered and analyzed. Nevertheless, the focus is concentrated on the areas Clariant believes to be of particular interest to both the company and interest groups, i. e. stakeholders. In other words, topics as well as current and future tasks and measures are prioritized according to the level of interest on the part of Clariant and its interest groups.

A certain lack of certainty arises from the fact that the interests of stakeholders cannot always be measured with the desired degree of objectivity and also from the fact that these interests in some cases differ considerably from one another. Clariant attempts to account for this to the greatest extent possible by means of a »weighted balance« and by conducting a more detailed analysis in the coming years as part of an ongoing improvement process.

MATERIALITY MATRIX by Clariant



The analysis at a superordinate, global level reveals company and industry-specific trends, weighted according to the individual significance of Clariant's campaigns for the respective interest groups. The closer each topic is to the top right corner of the matrix, the more important it is and the greater its influence on Clariant and the direction of the business. The relative impact on Clariant was determined by the members of the Sustainability Council.

At the end of 2012, Clariant initiated an intensive dialog with a number of other relevant stakeholders through its stakeholder survey, which addressed consumer and environmental protection agencies, research institutes, trade unions, national and supranational authorities and governmental and non-governmental organizations. The results of these surveys have been integrated in the development of the materiality matrix, and will also be included in the contents of the Sustainability Report 2013.

CLEAR AND STRAIGHTFORWARD REPORTING STRUCTURES

Clariant refers to the framework of the Global Reporting Initiative (GRI) when it comes to structuring the individual sustainability issues and areas. It applies reporting profile 3.0 and takes into consideration the points mentioned therein. Topics that have little or no relevance to Clariant are mentioned but not discussed in detail.

This Clariant Sustainability Report includes all Group companies and plants as well as all relevant business and subject areas. An organizational overview can be found on page 78 of this report and a comprehensive explanation can be found on pages 200 to 203 of Clariant's 2012 Annual Report. In exceptional cases, deviating reporting is expressly identified and explained in the respective location. There are no other restrictions. The representation of the sustainability areas and activities in the Report cover all major issues for Clariant. This Report was drawn up with great care and following a comprehensive review in order to provide Clariant with a balanced representation of its sustainability efforts.

Süd-Chemie AG, which was acquired in 2011, was included for the first time in Clariant's 2012 Sustainability Report. This inclusion has not led to any change in data collection or the reporting structure and only the scope of the Report has increased. This has been indicated in the corresponding parts of the text where it is necessary for purposes of clarification and comparison. In the past, data have often been provided in relation to production volumes. In view of this fact in particular, comparability with past publications is fully assured. Significant differences are adequately clarified and explained where necessary.

In the course of 2013, Clariant will divest further business areas in order to balance its current corporate, activity and product portfolio. Most activities will be continued. In contrast to the Annual Report, these changes do not affect reporting year 2012. In accordance with the International Financial Reporting Standard 5 (IFRS 5), Business Units held for sale must be listed as discontinued activities (or activities held for sale) in the income statements and the balance sheet. There were no other structural changes from the previous year's Sustainability Report. An overview of the most important Group companies of Clariant Ltd can be found on pages 200 to 203 of the Annual Report.

THOROUGH COLLECTION AND EVALUATION OF ALL DATA
All sustainability-related data and facts are collected, evaluated and compiled in all plants. Information about suppliers is obtained from supplier audits. Information about the sales side is analyzed insofar as it is provided by customers. Clariant places a great deal of emphasis on environmental issues and, above all, environmental safety. As a result, all safety and environmental data and information have been carefully and comprehensively collected and stored for many years. This is underscored by the objectives for 2020 (see page 11 of this Report).

In the wake of an extensive restructuring program, the number of employees decreased by 4 800, nearly one quarter of the total staff, between 2005 and 2010. At the end of the restructuring, the Human Resources department began to establish a systematic method for entering the structures into data and reporting systems. In the future, Clariant will be in a position to provide comprehensive reporting concerning Human Resources as well as training and welfare programs. This is already taking place in view of product stewardship, which is essential for a provider of specialty chemicals. This Sustainability Report also devotes a great deal of attention to the numerous corporate and social activities of Clariant which have been initiated in locations around the world. All corresponding areas of focus are defined in Clariant's sustainability policy (see page 18 – 19 of this Report).

As part of Clariant's safety management, all processes are subject to corresponding risk analyses. These include the intensive evaluation of all equipment, apparatuses and machines in view of possible malfunctions, failures or operation errors. The respective location carries out the checks in collaboration with the individual responsible for the environment, health and safety and, if necessary, representatives from other departments. The entire manufacturing process is analyzed in the process, including the receipt of raw materials and the initial use of all equipment, apparatuses and machines. Operating plants are under constant observation and aligned with target levels where necessary. The analyses are documented and involve the identification of potential risks and hazards as well as the determination of technical and organizational preventive measures. The safety of processes and plants is consistently checked by means of internal audits. The causes of all operational incidents are investigated in order to determine the corresponding measures. This is done with the involvement of the responsible process safety experts in order to ensure that the events undergo a comprehensive safety-related evaluation. All responsible persons involved, in particular production managers, plant engineers and safety experts, contribute to this process on an ongoing basis.

A new software platform for ESH reporting was introduced in 2012. The software is used worldwide, with access being gained via Web browser using an authorization-based »single sign-on« process. This process and the integrated workflow ensure that full responsibility is taken by the site manager for site data, and that the authorization of the data transmitted by individual sites is thus guaranteed. The factors and calculations used are defined in a Guidance Note.

The only ESH data reported and recorded are those involving activities at the specific Clariant production sites. The data are transmitted at the site itself. In the case of large sites, data from third parties may be used (e. g. infrastructure operators). These are generally comprehensively self-certified, thereby ensuring valid data.

V. Corporate Governance at Clariant

Clariant's corporate governance principles define the management structure, organization and processes of the Clariant Group in order to provide transparency and guarantee sustainable long-term success. The Group is committed to Swiss and international standards of corporate governance and follows the rules set out in the Swiss Code of Best Practice for Corporate Governance and by SIX Swiss Exchange. Clariant conducts its business in compliance with the applicable laws and rules of free competition and rejects corruption in any form. Clariant avoids conflicts of interest and ensures that corporate assets will not be misused. Clariant strives for sustainability in all areas and at every process level. The Articles of Association, Organizational Group Regulations of the Board of Directors and Clariant Code of Conduct can be viewed online at www.governance.clariant.com.

STRICT GUIDELINES FOR SUSTAINABLE BUSINESS

The Clariant Code of Conduct defines responsible conduct and applies equally to all employees. It states that all employees must act in the best interests of Clariant at all times and avoid situations in which their personal interests conflict with those of Clariant. In certain circumstances, personal interests also include the interests of close family members. All employees are trained to comply with the Code of Conduct. Clariant's Compliance Officer is the contact point for all compliance questions and is also responsible for initiating the tracking of all notifications of Code breaches. It is a means for protecting the company's reputation and reducing risks for shareholders.

Clariant places the highest value on fair dealings with competitors, suppliers and customers. There were no complaints in 2011 about conduct in violation of fair competition or about formation of cartels or monopolies, or legal actions or complaints concerning compliance with legal provisions on unfair competition. The same applies to protection of customer data; there have been no complaints about violating protection of customer data.

Clariant believes it is just as important for the company to take responsibility for public welfare and the common good wherever the Group has business operations. Above all, this sense of responsibility also includes Clariant's responsibility towards employees. Corporate values are ultimately a component of the annual performance review for employees throughout the organization.

In 2012, Clariant devised a Group-wide employment policy. In the policy, Clariant documents its responsibility requirement vis à vis employees and its commitment to mutual respect, trust and integrity. Clariant recognizes the human rights of all employees and respects these rights and, in particular, their dignity, personal liberty, equality, and freedom of opinion.

Furthermore, Clariant has set guidelines for itself with regard to the purchasing of personnel services. These guidelines apply to the entire Group worldwide. They define standards intended to ensure that Clariant's Human Resources department supervises the quality of these services in a professional manner and in accordance with uniform standards.

CLARIANT'S MANAGEMENT STRUCTURE

The Board of Directors of Clariant Ltd is the highest management body and consists of a minimum of six and a maximum of twelve members. The term of office of each member elected is three years. Re-election is possible. The Board of Directors consists of the Chairman, one or more Vice Chairmen and the other members. With the exception of Günter von Au, who was chairman of the Board of Directors of Süd-Chemie AG until March 31, 2012, no non-executive member of the Board of Directors held a senior management position at Clariant Ltd or any Clariant Group company between 2009 and 2012 or has any significant business relationship with Clariant Ltd or any other Clariant Group Company. The members of the Board of Directors constitute the Chairman's Committee, Compensation Committee, Audit Committee, and Technology and Innovation Committee.

The Board of Directors appoints the Chairman, Vice Chairman/Chairmen and members of the committees. The Board of Directors meets at least once a quarter. At the invitation of the Chairman, the CEO, CFO, and other members of the Executive Committee and/or other employees and third parties regularly attend the meetings of the Board of Directors for the purpose of reporting or imparting information. Each committee has a written charter outlining its duties and responsibilities. The committees report on their activities and results to the Board of Directors. They prepare the business of the Board of Directors in their respective areas.

The Chairman's Committee comprises the Chairman, the Vice Chairman and two other members of the Board of Directors. The Committee prepares the meetings of the Board of Directors and meets as needed. It makes decisions on financial and other matters delegated by the Board of Directors in accordance with the Bylaws of the Board of Directors. It also makes decisions on matters that would normally be handled by the Board of Directors but cannot be postponed. The Chairman's Committee draws up principles for the selection of candidates for election and reelection to the Board of Directors and for the office of CEO, and prepares the corresponding recommendations. Further, the Chairman's Committee considers and submits to the Board of Directors the CEO's proposals concerning candidates for Executive Committee positions.

The Board of Directors has delegated the executive management of the Clariant Group to the CEO and the other members of the Executive Committee. The Executive Committee is mainly responsible for implementing and monitoring Group strategy, for the financial and operational management of the Group, and for the efficiency of the Group's structure and organization. The members of the Executive Committee are appointed by the Board of Directors on the recommendation of the Chairman's Committee.

The Executive Committee consists of the CEO, the CFO and two other members. The Executive Committee meets regularly at the Corporate Center in Pratteln or at other Clariant sites worldwide. It uses such external meetings to discuss business performance with the management of the local companies in person. Only one member of the Executive Committee, the CEO, may also be a member of the Board of Directors.

With the exception of the CEO (see Clariant Ltd 2012 Annual Report, page 113), the members of the Executive Committee neither undertake other activities nor hold consultancy functions or other offices. There are no management contracts with third parties. The members of the Board of Directors and the Executive Committee are all male and are profiled in the 2012 Annual Report of Clariant Ltd.

The chairman of the Board of Directors is independent. His only relationship to Clariant, aside from the fact that he is also a shareholder of Clariant Ltd, is his role as chairman of the Board of Directors. Neither he nor any person related to him is employed by Clariant or a company that does business with Clariant or is affiliated through a consultancy or similar agreement.

In accordance with the law and the Articles of Association, the Board of Directors is the ultimate decision-making authority for Clariant Ltd in all matters except those decisions reserved by law or the Articles of Association for the shareholders. The Board of Directors has sole authority in particular for the following in accordance with and supplementary to Article 716a of the Code of Obligations (non-transferable and inalienable duties of the Board of Directors) and Article 23 of the Articles of Association:

- Providing the strategic direction of the Group;
- Approving the basic outline of the Group's organization and its governance;
- Supervising the overall business operations;
- Evaluating the performance of the CEO and members of the Executive Committee;
- Appointing and dismissing the CEO and members of the Executive Committee, the Head of Internal Audit and other key executives;
- Approving the basic accounting system, financial planning and control;
- Approving the Group's annual budget;
- Reviewing and approving the quarterly financial statements and results release of Clariant Ltd and the Group;
- Approving the Group's consolidated financial statements for issue at the end of the fiscal year;
- Approving major M&A transactions and financial transactions of considerable scope or those involving special risks, in particular capital market transactions and other financing transactions (e. g. large loans) as well as changes in conditions associated therewith;
- Ensuring a management and corporate culture that is appropriate for the company's objectives;
- Ensuring an internal control system (ICS) and adequate risk and compliance management, in particular on financial, corporate governance and citizenship, personnel and environmental protection matters;
- Ensuring succession planning and management development;
- Convening the Annual General Meeting (AGM), determining the items on the agenda and the proposals to be made to the AGM, and approving the Annual Report including the annual financial statements of Clariant Ltd and the consolidated financial statements of the Group.

MANAGEMENT PERSONNEL

In 2012, the Board of Directors of Clariant consists of three Swiss citizens, three German citizens, one British, one Austrian and one US citizen. The members of the committees are members of the Board of Directors. The Executive Committee consists of four German citizens.

The members of the Clariant's Board of Directors and Executive Committee have been selected solely on the basis of ability and performance. The members of the Board of Directors are all at least 43 years old and the members of the Executive Committee are all at least 48 years old. Clariant has not introduced any specific quotas for women, nationalities, ethnic minorities or special age groups for the Board of Directors and Executive Committee. However, it has evaluated and selected all candidates on the basis of the same list of criteria. See also pages 116 to 122 of the 2012 Annual Report.

MANAGEMENT COMPENSATION

Compensation for the Board of Directors and the members of the Executive Committee is described in detail in the Notes to the financial statements and in the compensation report of Clariant Ltd (Annual Report 2012, pages 128 to 141) and is verifiable. The company's compensation policy for executives is based on three main principles:

- The level of compensation should be competitive and in line with market conditions and enable Clariant to recruit experienced executives and experts from anywhere in the world and ensure their long-term commitment to the Group.
- The structure of total remuneration should be highly performance and profit-oriented in order to ensure that shareholder and management interests are aligned.
- The compensation components should be straightforward, transparent and goal-oriented, so as to guarantee maximum clarity and goal orientation for all participants (shareholders, members of the Board of Directors, CEO and members of the Executive Committee).

In order to uphold these principles, the Compensation Committee analyzes and discusses market developments at regular intervals and considers the implications of these developments for Clariant. The Compensation Committee of the Board of Directors evaluates on an annual basis the degree to which the objectives of the company as a whole and those of the Executive Committee have been met. It then orders that fund be allocated in accordance with Clariant's strategic business plan for the prior year, and the allocation is then approved by the Board of Directors. This procedure ensures that bonus payments to employees, including executive management, are also in line with the Group's overall performance and objectives.

RESPONSIBILITY FOR SUSTAINABILITY INGRAINED IN ALL LEVELS OF THE COMPANY

The management of the Clariant Group, local plant management and ultimately every individual employee is part of a continuous improvement process. Through the provisions, processes, regulations and instructions that comprise the management system and through training and qualification programs, Clariant ensures that employees have the skills required for their respective jobs. Employees can therefore review their own actions and results as well as those of their fellow employees and can identify potential for improvement. Risks and opportunities are also identified and appropriate measures initiated on this basis.

Environmental protection and safety are integral parts of the responsibility assumed by Group management, local CEOs, plant managers, department heads and every employee. Each employee is required to follow regulations in his or her particular sphere of responsibility, develop processes and procedures and make sure that important information is passed on and that the necessary documentation is kept.

A sense of responsibility and commitment to improvement is encouraged by supervisors and managers. Employees are familiarized with tasks and challenges and how they relate to corporate policy, strategy and objectives. Everybody who is part of a project is involved with project identification. Performance-based teamwork is deliberately encouraged. The company suggestion schemes devised in the individual countries also support this process.

Furthermore, Clariant is in contact with external specialists, associations and authorities in order to determine focal points for environmental protection and safety programs. Priorities and programs for emission reduction, plant safety, or for improving industrial safety and training programs are developed in working groups and environmental protection committees.

Clariant established the Sustainability Council in order to assess and manage all of the Group's sustainability efforts as efficiently and effectively as possible. The Council is headed by the CEO and coordinated by the Group sustainability manager. All key functions of the Group's Business Units are represented on the Council. It assesses all of the Group's tasks and measures in the area of sustainability, including those initiated by the Executive Committee. In addition, since the reporting period the CEO of Clariant has served as the chairman of the Product Stewardship Program Committee of the European Chemical Association (Cefic) (see also the Sustainability Council report on page 8).

Principle 15 of the Rio Declaration requires that countries take a precautionary approach, according to their capabilities, in order to protect the environment. Thus measures to prevent environmental degradation must not be postponed where there are threats of serious or irreversible damage. At the same time, however, such measures should not pose an excessive financial burden. Principle 15 of the declaration ultimately combines environmental protection with cost-benefit analysis. Clariant has applied this principle to the company.

In order to protect the environment, the precautionary approach is applied accordingly. In view of the threat of considerable or irreversible damage, the lack of complete scientific certainty should not be a reason to postpone cost-effective measures which prevent damage to the environment.

The European REACH regulation on the testing and approval of chemicals, which Clariant supports, is based on this precautionary principle. Furthermore, the Clariant Group continuously and systematically assesses all optimization opportunities that reduce the environmental impact in its 150 plants worldwide. These opportunities are then analyzed and prioritized according to their urgency, evidence and relevance, and subsequently implemented to the extent possible.

MONITORING OF SUSTAINABILITY PERFORMANCE

Clariant has developed guidelines for guaranteeing product and production safety in order to limit as much as possible the impact of business operations on the environment, safety and health (ESH). The most important company goal in conjunction with our activities is to ensure human safety and protect the environment. The Clariant Group has therefore developed an extensive set of rules and measures as part of ESH management and has introduced a group-wide risk measurement system. Employee training sessions are held regularly in this connection, and processes, procedures and measures are continually monitored, both in-house and by external audits.

All of Clariant's production plants are scrutinized for potential risks and optimization opportunities. The results of these studies are included in the Clariant Group's risk control system, analyzed for urgency and relevance, and then implemented, if possible. ESH criteria are also a part of Clariant's business relationships. Suppliers, contractors, and service providers undergo random checks for compliance with these criteria. The careful selection process that is part of procurement management takes into account not only economic aspects but also purchasing and production processes as well as delivery routes and systems, all of which are evaluated on the basis of sustainability. Clariant works with customers to improve the entire process chain.

Clariant has developed the ESH management system with these criteria in mind. It is a component of process and strategy planning throughout the Clariant Group. It includes an ongoing compliance audit of the corresponding rules and regulations. All employees are responsible for the functional effectiveness of the ESH management system as it relates to their particular job, position and qualifications.

The monitoring of sustainability targets are governed by Clariant's Sustainability Policy. There are currently 27 guidelines that form part of the audit system for achieving the sustainability targets. A formal procedure for monitoring compliance with these guidelines and for analyzing potential weaknesses is currently being created in the form a database; this procedure will be introduced in 2013.

MEMBERSHIP IN ASSOCIATIONS

Clariant is actively involved in numerous interest groups and associations, most notably the International Council of Chemical Associations (ICCA), the Global Chemical Industry Association, the European Chemical Industry Council (Cefic) and the European Technology Platform for Sustainable Chemistry (SusChem). The objective of SusChem is to promote and facilitate increased sustainability in the areas of research, development and innovation in European chemicals and biotechnology companies. SusChem is a joint initiative of Cefic, the Society for Chemical Engineering and Biotechnology (Dechema), the European Association for Bioindustries (EuropaBio), the German Chemical Society (GDCh), the Royal Society of Chemistry (RSC) and the EFB Section on Applied Biocatalysts (ESAB) of the European Federation of Biotechnology. It is also worth noting Clariant's efforts on behalf of sustainability within the scope of the International Chamber of Commerce. In addition, Clariant or its national companies are represented in various national stakeholder interest groups (e. g. the German Chemical Industry Association (VCI) or the Swiss Society of Chemical Industries (SGCI)).

VI. Extensive dialog with interest groups

Clariant communicates on an ongoing and timely basis with important interest groups or stakeholders in the form that is relevant for the particular target group. In particular, Clariant's stakeholders include shareholders, employees, suppliers, customers, local residents near Clariant facilities, authorities, and associations. Clariant conducts dialogs with stakeholders if needed. Depending on the respective countries, issues and target groups, Clariant conducts a reasonable and situational exchange of views, at least once a year.

OPEN EXCHANGE WITH STAKEHOLDERS

Clariant maintains an open, multilateral communication culture with stakeholders. All of these groups have a strong interest in the development and decisions of Clariant. Clariant considers the efficient flow of information on both sides to be essential in terms of corporate responsibility and economic success.

Clariant also maintains an intense dialog with financial market participants, investors and analysts. During the reporting year, a Capital Markets & Media Day was held in Munich which interested stakeholders from the area of finance and media representatives were invited to attend. Clariant also conducted around 80 individual meetings and around 150 group meetings with investors and analysts. It also held about 60 conference calls and 15 days international presentation trip (road shows) for the financial market. These efforts resulted in valuable suggestions for prioritizing relevant sustainability topics.

As regards employees, Clariant believes it is important to discuss their professional and personal issues and that their professional experience is a key factor for moving the company forward. This is why Clariant has a basic interest in including the various groups listed above in its communication and information exchange process. In most cases, the contact is actively initiated by Clariant on a regular basis. But stakeholders often come to the company with a wide range of concerns, which are then seriously discussed.

Stakeholders near the various locations or near central company headquarters are included in the work of the company through various activities such as surveys, neighborhood forums, open door events, industrial park discussions, cooperative arrangements between plant management and labor unions, written communications and information on the Internet. Events are generally held on a quarterly or semiannual basis. Meetings with individual stakeholders such shareholders or other external interest groups were held before this report was prepared.

Questions, suggestions, concerns and complaints (such as about noise from production facilities) are recorded in detail and forwarded to the proper department in the company for handling. This department reviews the facts of the matter seriously and gets in touch with the stakeholders or affected parties as soon as possible. A whole series of changes results from this process. Some facilities, for example, are directly adjacent to residential areas. Even within large industrial parks there are neighbors due to the large number of different operators. Protecting our own employees from harmful noise levels is just as important as protecting our neighbors. Clariant is therefore making an effort to reduce noise nuisances even further. However, stakeholder questions and suggestions have not necessitated any serious changes to date. In the end, our goal is to strengthen the positive impact on all other persons connected with the company and to largely eliminate any negative effects.

ONGOING EXPANSION OF THE DIALOG WITH STAKEHOLDERS

Clariant strives to identify the opinions, interests and trends among stakeholders. It has therefore initiated a special study which goes beyond any previous efforts. With the help of the Collaborating Center on Sustainable Consumption and Production (CSCP) in Wuppertal, Clariant is creating a »sustainability map« of long-term trends and topics relating to sustainability in the chemicals industry. The trend analysis is part of a comprehensive, long-term program initiated by Clariant to approach sustainability from new perspectives and thereby assume a forwardlooking role.

Exchange and cooperation with as many stakeholders as possible is a key component of the program. Creating the »sustainability map« represents the first step towards a debate with key opinion makers and experts from associations, NGOs, politics, science, research institutes, and charitable organizations. Their contributions and findings provide the basis for an ongoing dialog between all participants in the area of specialty chemicals.

Every two years, Clariant conducts a global customer satisfaction survey as part of its quality management system. In addition to questions about customer satisfaction according to eight criteria, the relevance of these criteria for customers and the relative competitiveness of Clariant, the survey also measures and evaluates various image aspects and the strength of customer loyalty. A number of minor optimizations have already been made as a result of the analysis results. The representative survey of around 2 500 customers in 2009 in particular identified potential for improvement for the Clariant Group in the area of logistics; the 2011 and 2012 survey of around 3 500 customers revealed potential for improvement in complaint management. The reaction and processing times in these areas were significantly decreased and the quality of results further improved. The Executive Committee translated the results of the surveys into objectives for the Business Units which are now monitored on a monthly basis. The 2013 customer survey will be conducted in the second and third quarters.

The Complaint Management Cockpit is also available for the ongoing monitoring of complaints, making it possible to communicate statistics of registered complaints on a monthly basis to the businesses and the Executive Committee. The statistics contain details on factors, such as the complaint rate (number of complaints per 100 deliveries), which is between 2 and 1 % (2012: 1.3 %) for the company as a whole, across all Business Units and countries. In addition to this, the corresponding rates for logistics and product quality complaints are also recorded. What is more, compliance by all business processes with the corresponding rules and regulations is monitored with the help of special software and in accordance with legal requirements. In the event of errors, for example a missing data sheet, improper registration, missing data, disregarding of volume limits, etc., the respective business process is automatically and immediately halted and the responsible employee is notified. Systematic errors are addressed in projects and audited and remedied as part of quality management.

In reporting year 2012, Clariant held its first-ever supplier days, special information events for key suppliers, in India and China. These two-day events were attended by more than 300 suppliers and provided business partners with detailed information about Clariant's safety and sustainability requirements. The aim was to further increase sustainability awareness among Indian suppliers. The focus of the presentation was on compliance with the principles of Responsible Care® and sustainability and global regulations for the chemicals industry. The agenda also included the latest presentation by REACH, the European guideline on the trading and production of chemicals. In this context, Clariant also offered suppliers specific assistance in the event that they had any remaining difficulties implementing sustainability principles.

VII. Economic performance indicators

Clariant's objective is to continuously improve its competitiveness. This means permanently increasing management and production efficiency and optimizing corporate and financial structures. It also means pursuing a consistent and sustained growth path that avoids major fluctuations and is aligned with ecological and social interests. The results of this strategy once again became evident in 2012 when, despite a slight economic slowdown, further progress was made with profitability and internal and external growth.

ECONOMIC PERFORMANCE

In 2012 as a whole, the Group generated sales of CHF 6.036 billion and an operating income (EBIT) before exceptional items of CHF 531 million on the basis of continued activities. Given this excellent overall picture, Clariant can report positive results on almost all levels and in most business areas following the restructuring process carried out in 2009 and 2010. The savings obtained through the Clariant Excellence initiative, for example, totaled CHF 300 million from its introduction to the end of 2012. Clariant expects to pay a distribution of CHF 0.33 per share for 2012, and net financial income and costs amounted to CHF 153 million. Clariant spent an amount in the low single-digit millions on donations to the needy and payments in kind to charitable causes worldwide. Detailed information can be found in the 2012 Clariant Annual Report on pages 143 to 148.

Pension and other employee benefit plans worldwide are monitored for relevance, compliance, costs and suitability as a valuable employee benefit. The staff retention value of pension and benefit plans is understood and consequently benefits are periodically benchmarked to be consistent with current typical practice in each country. Amending and revising pension plans is difficult and the impact on employees as well as any consultation requirements are always considered before any changes are implemented. The accounting and financial consequences of these pension and benefits plans are found in the Clariant annual report 2012, page 143.

Sustainable production also means the foregoing of subsidies and other individual public funding. In 2012, Clariant did not receive any direct or indirect transfer payments, with the exception of the instances listed below. Tax relief was granted in some countries, e. g. to promote exports, to all exporting companies based there and did not amount to a significant figure. In the reporting year, Clariant received a reduced-rate loan for investments in the double-digit millions from Kreditanstalt für Wiederaufbau (KfW) to concentrate global research and development (R&D) activities in Germany. The Clariant Innovation Center in Industry Park Höchst in Frankfurt am Main is an especially energy-efficient laboratory and office facility with more than 20 000 square meters of work space.

In 2012, Clariant received funding from the German Federal Ministry of Education and Research (BMBF) in connection with Germany's largest pilot plant for the production of climate-friendly cellulose ethanol from agricultural waste in Straubing, Bavaria (sunliquid© pilot plant). The funds provided by the BMBF and the Bavarian government in the amount of EUR 5 million each support research and development measures that are largely related to the sunliquid© pilot plant. The funds are for related research and development programs; however, no investments or assets in kind for the pilot plant were funded. These research and development measures may include research into various raw materials or the optimization of microorganisms used on an industrial scale.

Clariant pays wages and salaries that are in line with the market. However, at the end of 2012 Clariant's available global database was not comprehensive enough to make statements concerning gender-specific differences in the wages and salaries of employees compared to local minimum wages. In the course of 2013, representative results and findings are to be gathered based on newly introduced measurement and reporting standards in Human Resources which will enable detailed statements to be made about selected wage and salary structures at Clariant for this reporting year.

CONSEQUENCES OF CLIMATE CHANGE FOR CLARIANT

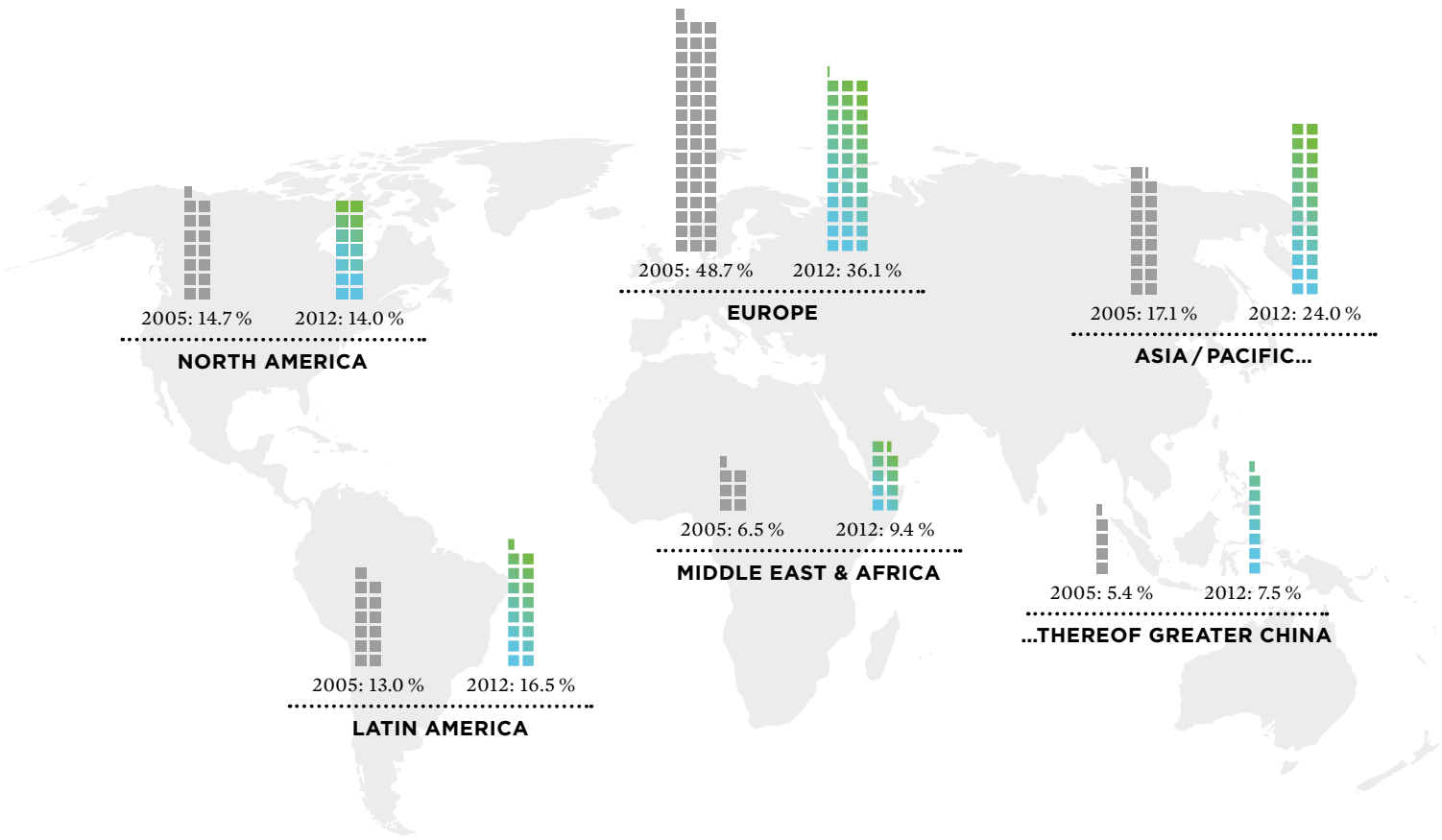
The topic of sustainability is deeply rooted in Clariant's corporate strategy, regardless of economic fluctuations and exceptionals. Sustainability-oriented management substantially enhances productivity and international competitiveness. At the same time, sustainable management reduces the impact on people, the environment and resources. The value that it generates over the medium to long term also benefits Clariant's shareholders and satisfies the needs and demands of capital markets. In this respect, climate change offers both opportunities and risks. Clariant takes account of current and future conditions and continually reduces climate-related emissions, for example.

The business opportunities for Clariant lie in the development of innovative products that require fewer and fewer materials and a greater proportion of renewable materials and are produced by processes that consume less and less energy. After all, the issue of climate change, which has been the focus of discussion in recent years, has led to greater environmental awareness and an increase in the demand for sustainable products, even in the area of specialty chemicals. As long as the market is willing to pay a higher price for these products, which is often the case, Clariant sees definite growth potential in this area in the coming years.

CLARIANT'S IMPACT ON LOCAL ECONOMIES

For Clariant, sustainability also means contributing in a positive way to the development of the local economy through the company's own business activities at each location. As a producer of specialty chemicals, Clariant is in global competition when it comes to the purchasing of raw materials. What is more, high standards are imposed by Clariant on the necessary quality and purity of the products we buy. The Code of Conduct for Suppliers developed during the reporting year outlines the sustainability standards for Clariant's suppliers (see also pages 9 and 10 of this report). It comprises environmental, social, human rights, economic and risk aspects.

SALES SHARE* by region



* incl. discontinued operations

As a producer of specialty chemicals, Clariant only does business with industrial customers worldwide and not with private individuals, i. e. end customers. In this respect, the local economic effects on (sales) markets in (close) proximity to Clariant's plants cannot be determined. However, in some cases Clariant's business indirectly has considerable influence on the local economy in that the salaries of its employees palpably strengthen the regional purchasing power. Even companies in the surrounding area benefit from the demand of Clariant's plants for products and services such as food, consumer goods and transportation services.

Local economic development is therefore supported by Clariant's activities – as an employer, as a customer for local products and services, and as a payer of taxes and fees in the respective regions or countries. This is particularly important in regions with emerging economies. Clariant thus raises the living standards of the population in each area, both directly and indirectly, by creating added value. Clariant is not aware of any significant negative effects resulting from its activities.

Clariant's global employment policy strives for a diverse workforce and aims to find the candidates best suited for an open position. Clariant hires, employs and promotes employees solely based on the qualifications and skills required for the work and in no way discriminates. The recruitment of employees is based only on their suitability for the open position and their individual potential for a successful future at Clariant – in line with the corporate strategy and objectives. In 2012, 58 % of the individuals hired at the top four management levels came from the country in which the hiring Group division was located.

VIII. Ecological performance indicators

Environmental protection is very important at Clariant. It starts with product design and product development, continues with the production process, the resources used, transport safety and safe application, and finally with optimal use. We examine the raw materials and the manufacture, distribution, usage, and disposal of products in terms of environmental and commercial requirements as well as the criteria for eco-efficiency. Potential risks inherent in production facilities are systematically ascertained and analyzed in order to determine and realize as much improvement potential as possible.

The amounts of energy needed for production are also recorded, and products and processes examined for potential improvements in this respect. The same procedure is applied to air emissions and water contamination. Clariant does not begin production until the optimum balance of requirements feasible according to the state of the art is found. This approach has helped Clariant make measurable and in some cases significant improvements in virtually all environmental areas in recent years. The relative consumption of energy and resources and relative emission of pollutants have therefore decreased significantly.

The increasingly efficient production procedures and processes at Clariant have also led to declines in absolute consumption and emissions despite higher production. Some indicators have increased slightly compared to 2012, while others have decreased. These marginal fluctuations have resulted from changes in the product portfolio due to market developments. Thus in the reporting year, for example, more energy-intensive but less water-consuming products were produced. Clariant's resource consumption has now reached such a low level that further improvements will not be as pronounced as in previous years.

Starting with the reporting period 2012, environmental data include those of the 2011 acquired Süd-Chemie. Only limited comparability of the figues is possible due to product-related very different conditions of production. Therefore, in order to illustrate trends, data of the earlier Clariant are being used. In total, the data of 150 production sites are collected.

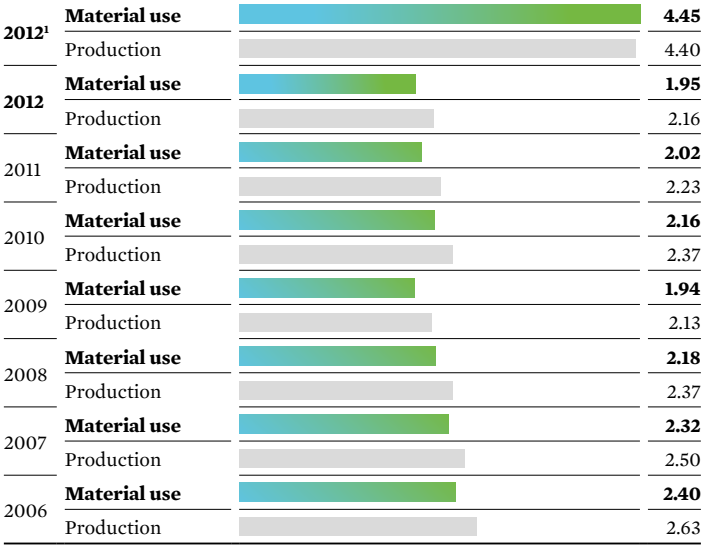
Nevertheless, these advances are incentives for Clariant to further reduce its resource consumption in relation to production volumes and also to further reduce relative pollutant emissions. Clariant has set binding targets for 2020 in this respect. The management and control systems now introduced should ensure that these objectives are achieved. See also pages 6 and 11 of this report.

MATERIAL USE

In recent years, Clariant has continuously improved the efficiency of processes and production. As a result, the relative – i. e. in relation to the scale of production – amounts of resources used and of waste, waste water and air emissions generated have declined steadily. For a better understanding it should be noted that the total product amount can be higher than the amount of raw materials used because Clariant also manufactures products and mixtures that contain water, and this water is accounted for and disclosed separately.

Clariant tries, wherever possible, to use recycled materials in production. However, the percentage is low due to the nature of the production process, as recycled raw materials very often cannot be used on account of the cleanliness requirements. Their use is also not possible in specialty chemicals, such as those produced by Clariant, due to safety reasons. Clariant uses almost only fresh raw materials for direct precursors for the reasons mentioned above.

MATERIAL USE AND PRODUCTION m tons



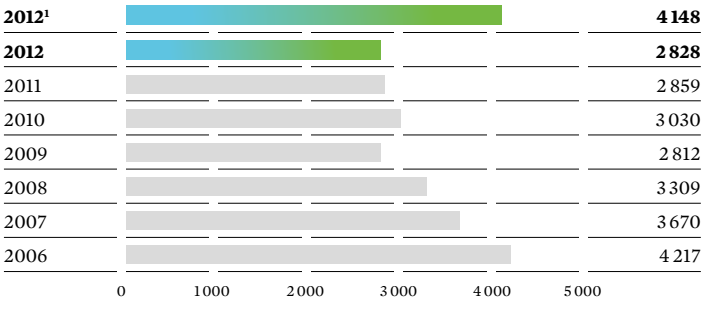
[1] incl. Süd-Chemie

However, there is an internal cycle for product purification and separation as an integral part of the production process for auxiliaries. The material in such a recycle streams is used several times, but meaningful detection of the corresponding amounts is impossible due to the circulation process, which delivers the sought-after energy and resource savings. Clariant is also increasingly using renewable resources wherever possible.

ENERGY CONSUMPTION

Clariant's plants primarily need energy in the form of steam, electricity and natural gas. Electric power is mainly used for drives, such as electric motors in mixers, pumps and other process-engineering equipment. The measurement and control technology and the lighting too require electricity. Clariant uses natural gas for heating dryers, firing crack furnaces and generating electricity and steam its own power plants. It uses steam to heat reactors and separators such as distillation columns. The resulting condensate is, whenever possible, used for heating purposes. Direct energy consumption, i. e. the use of primary energy sources, takes place at Clariant's sites for electricity, heat and steam generation purposes. At some locations in China and Indonesia coal ist used as energy source.

ENERGY CONSUMPTION m kilowatt hours



[1] incl. Süd-Chemie

Indirect consumption at Clariant mainly results from the purchase of electricity and steam from external sources in place of own production. Due to difficult delineation and the unclear ratio of costs to benefits, indirect emissions of greenhouse gases other than those reported are not recorded. What is recorded is total energy consumption, independently of whether it has been internally produced or externally procured. Thus, indirect emissions, such as CO_2 from electricity-generating coal-fired power plants, too are accounted for. They are not disclosed separately in this report, however.

For Clariant, energy is an important production and cost factor. Thus, as early as 2006 Clariant initiated a project to reduce energy consumption by the year 2010 by up to 15 % (see also page 42). The aim was to secure cost savings and reduce greenhouse gas emissions. The necessary investment, according to one of the conditions, was to be recouped within five years. The energy consumption of the 20 largest plants was subsequently recorded and analyzed in detail, and the potential savings and investment amount required calculated. Altogether, more than 400 individual projects were identified. Their implementation was very successful, and the originally-stated objectives were achieved.

Thus between 2005 and 2012, Clariant's production has become significantly more energy-efficient. The energy consumption per metric ton of product decreased during the period in question by 24 % to 1 308 kilowatt hours (kWh) (incl. Süd-Chemie: 941). When compared to the slightly lower production volume in 2005, Clariant's global energy use has declined significantly, from about 4 660 million kilowatt hours in 2005 by almost 40 % to around 2 828 million kilowatt hours in 2012 (incl. Süd-Chemie: 4 149).

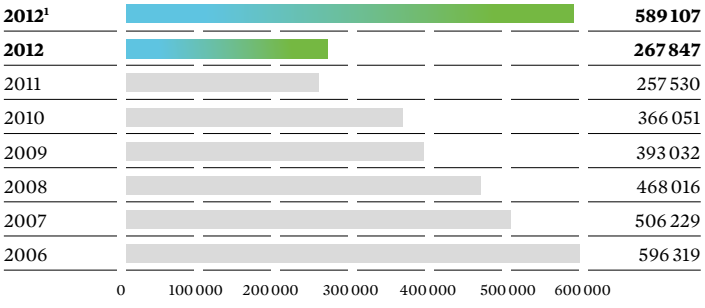
Clariant reduces carbon dioxide emissions by optimizing production processes continuously to make them more environmentally friendly. For example, at the German Gendorf plant the carbon dioxide that is constantly generated by the catalytic combustion facility is cleaned and passed on to partner company Linde for pressure liquefaction and other industrial uses. As a result of this cooperation, the CO_2 emissions generated by Clariant in Gendorf have been permanently reduced by 95 %. Clariant is attempting to reduce air emissions by using innovative technologies. Often the successes are small but in total lead to significantly lower emissions of pollutants (see also page 42).

Reducing energy consumption is one of Clariant's main corporate objectives and not just for commercial reasons. Using resources sparingly is also high up on Clariant's priority list. Much has been done and achieved over the past few years in both respects. Energy efficiency has been greatly increased, and the consumption of energy per metric ton of manufactured products has been significantly reduced.

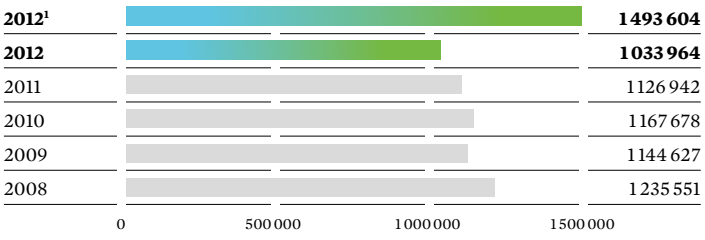
GREENHOUSE GAS EMISSIONS

Emissions into the atmosphere, despite all environmental protection efforts, cannot be completely avoided. They are simply side effects of production processes like waste or the consumption of resources and raw materials. Emissions are subject to limits that are laid down in the official operating licenses for the plants. Clariant monitors compliance with these limits at each individual site by taking its own measurements and additionally using measurements taken by independent institutes in accordance with regulatory requirements. Clariant determines the total emissions at each individual site at regular, predetermined intervals.

CARBON DIOXIDE EMISSIONS tons



GLOBAL WARMING POTENTIAL (DIRECT AND INDIRECT EMISSSIONS)
tons of CO_2 equivalents



[1] incl. Süd-Chemie

The volume of CO_2 directly emitted by Clariant between 2005 and 2012 has been declining. Thus, the total volume of CO_2 emitted decreased (also as a result of unique savings, particularly in 2010 and 2011) from around 640 000 to around 268 000 metric tons (incl. Süd-Chemie: 589 000 tons), and per metric ton of manufactured product from 236 to 124 kg/t (incl. Süd-Chemie: 134 kg/t).

The volume of all greenhouse gases (expressed in CO_2-equivalents), i. e. direct and indirect emissions, decreased between 2007 and 2012 from 1.36 million to 1.03 million metric tons (incl. Süd-Chemie: 1.49 m t), and per metric ton of manufactured product from 541 to 478 kg/t (incl. Süd-Chemie: 339 kg/t). Indirect greenhouse gas

emissions are predominantly generated by external energy procurement, usually in the form of electricity and steam. To calculate the amounts, country-specific conversion factors are used, which are determined on the basis of the existing infrastructure in the country in question. The CO_2-equivalent has only been recorded since 2007.

Particle emissions in the air fell between 2005 and 2012 by 48 % to 53 metric tons (incl. Süd-Chemie: 271 t), and per metric ton of manufactured product by around 34 % to around 25 grams (incl. Süd-Chemie: 62 g/t).

Since 2008, the »European Pollutant Release and Transfer Register« has existed in the European Union, on the basis of which the public is informed annually of all major air, soil and water emissions as well as waste generation volumes. These reports on certain individual plants are freely accessible on the Internet. The aim of the detailed collection of the corresponding information is to facilitate public access to environmental information as well as improve participation in environmental decision-making.

In collaboration with the European Business School International University in Wiesbaden, Clariant launched a program in 2012 aimed at studying all activities in terms of their CO_2 reduction potential. The entire Group is examined using technology and by questioning relevant employees. Based on the results, general guidelines for reducing greenhouse gas emissions will then be drawn up. This program is designed as a medium- to long-term program and should induce a continuous improvement process.

Substances with ozone-depleting potential are exclusively used in closed systems, mostly cooling systems. Clariant records both the respective charges and any losses. Generally the cooling agents used have no or significantly lower ozone-depleting potential than the substances R11 or R22. This has allowed the total loss-induced resulting effect on the ozone layer since 2005 to be reduced by around 60 % and – converted to R11 equivalents – is now just a few hundred kilograms. When cooling units are replaced or serviced, only coolants such as ammonia are used that have no ozone-depleting effect and where possible no greenhouse-gas potential either.

Since 2005, significant emissions of other inorganic pollutants such as SO_2 and NOx have been reduced – compared with the reporting year – by more than 50 %, and organic emissions (VOC) by almost 70 % (without Süd-Chemie).

WATER USE AND WASTEWATER

One of the main auxiliaries for the chemical industry is water. Clariant mainly needs it for cooling purposes and as process water in production. Of the water volume used in 2012, Clariant companies used around three-quarters for cooling in production plants, and around one-seventh in production processes, with the remaining amount needed as a product component or for sanitary purposes.

At some sites, recooling water is also used as a coolant, which is continuously circulated and after use recooled at large recooling plants. This environmentally-friendly cooling method is used where technically possible, and in 2012 saved approximately 180 million m^3 of water, which would otherwise have had to have been additionally procured.

EMISSION OF NITROGEN DIOXIDE AND SULFUR DIOXIDE tons

	2012[2]	**2012**	2011	2010	2009	2008	2007	2006
NOx	**710**	**305**	292	309	331	428	424	515
SO_2	**772**	**371**	421	397	353	422	538	611
VOC[1]	**277**	**265**	352	461	454	577	601	654

[1] Volatile organic compounds [2] incl. Süd-Chemie

PARTICULATE EMISSIONS

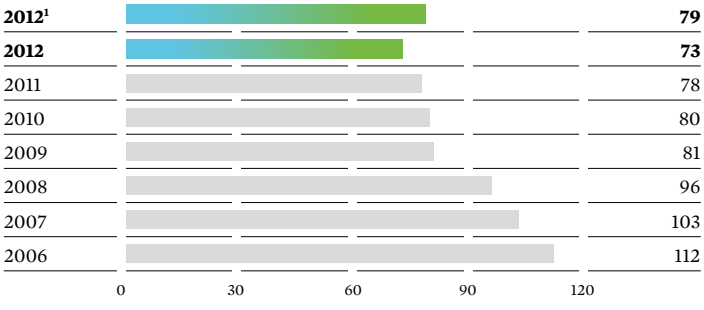
	2012[1]	**2012**	2011	2010	2009	2008	2007	2006
in relation to production volume in grams/tons	**62**	**25**	24	28	31	32	32	34
in tons	**272**	**53**	54	66	65	77	80	89

[1] incl. Süd-Chemie

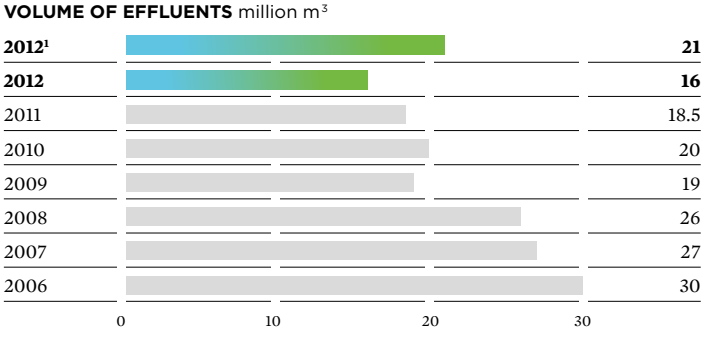
Total water consumption between 2005 and 2012 decreased significantly, from 114 million to 73 million m^3. Consumption per metric ton of manufactured product fell by around 20 % from 42 to 34 m^3.

The water requirements, especially of the large production sites, are met for the most part by river water. Before it flows into the piping system of each site, the river water is cleaned according to its intended purpose using various filter systems. Remaining amounts are obtained from the respective local water grid, but not in volumes that would significantly impair on the water system.

WATER CONSUMPTION million m^3



VOLUME OF EFFLUENTS million m^3



[1] incl. Süd-Chemie

Clariant uses water for a variety of purposes in the production of chemical products, and the water is partly polluted as a result. At each site therefore, production wastewater, after multistage chemical-physical precleaning, is fed to largely biological wastewater treatment plants, where it is microbiologically cleaned. In contrast, cooling water along with rain water can be fed into rivers without cleaning as it does not come into contact with chemicals. To prevent contamination of the intake water through undetected leaks in the cooling system, the cooling water and rainwater are constantly analyzed at the individual sites as an additional safety measure. If contamination is discovered, discharge into the rivers can be prevented by various containment systems.

Clariant's wastewater volume also declined between 2005 and 2010 by about a third to a total of 20 million m^3 due to the drop in production. In the 2012 reporting period, the actual total volume of wastewater from Clariant companies decreased once again by around 11 % to 16.8 million m^3 (incl. Süd-Chemie: 21.4 m^3) despite largely unchanged production levels. A further improvement per manufactured metric ton from 8.3 to 7.8 m^3 per metric ton of production output was also achieved (incl. Süd-Chemie: 4.9 m^3/t).

Between 2005 and 2012, Clariant reduced the chemical oxygen demand (COD) in the wastewater of its companies after wastewater treatment by more than 40 %. Nevertheless, COD entry is to be reduced further, for example by recycling and recovering so-called mother liquors and by reducing product quantities in wastewater. This will also lower production costs.

Only small amounts of heavy metals are contained in the wastewater of Clariant's individual sites. The extrapolated values are partly based on concentrations that are at or below the detection limit. The amount of introduced heavy metals is also very strongly dependent on the elimination rate of the upstream water treatment plant, the chemical composition of the wastewater, the effectiveness of the precipitation prior to entry into the biological purification stage and the adhesiveness of the heavy metals or heavy metal complexes to sludge.

Between 2005 and 2012, heavy-metal input decreased by 30 %. The wastewater discharged by Clariant is largely cleaned and therefore does not burden the environment excessively. Thus, Clariant has already achieved a very high level in terms of wastewater and water treatment.

GENERATED WASTE

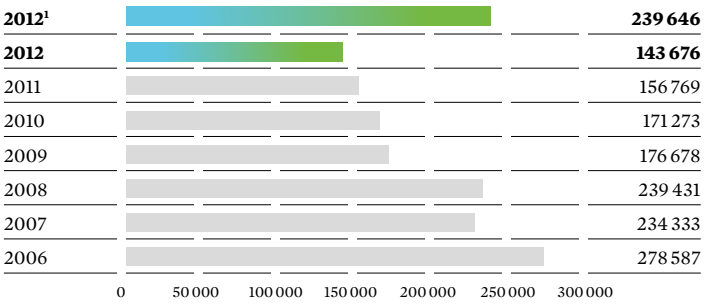
At Clariant, the prevention of waste takes priority over recovery or disposal. Therefore, every effort is made during the development and manufacture of products to ensure that the lowest possible amount of waste is generated. Unavoidable production waste is recycled or disposed of properly. Each type of waste is recorded and precisely analyzed and described. Proper disposal must be proven and documented on internal records, including where the waste originated, which amounts have arisen during what period, the properties of the waste, whether the waste can be classified as hazardous, and how it can be recycled or disposed of.

QUANTITIES OF WASTE IN TONS tons

	2012[2]	**2012**	2011	2010	2009	2008	2007	2006
Hazardous waste	**80 708**	**72 806**	81 282	84 911	81 443	119 971	111 313	144 188
Recycling[1]	**18 579**	**18 082**	26 150	22 987	18 531	34 298	37 230	54 215
Treatment[1]	**40 998**	**39 773**	39 894	42 707	49 881	66 259	61 600	80 428
Landfill[1]	**37 831**	**27 811**	28 079	29 012	24 869	31 927	23 822	22 267
Non-hazardous waste	**158 937**	**70 870**	75 486	86 362	95 235	119 461	123 020	134 399
Recycling[1]	**82 016**	**26 563**	22 798	24 475	31 771	37 343	33 577	41 447
Treatment[1]	**28 258**	**25 426**	52 220	71 663	73 428	101 877	102 509	108 861
Landfill[1]	**133 047**	**37 045**	30 127	27 064	24 451	32 129	41 872	46 236
Total waste	**239 646**	**143 676**	156 769	171 273	176 678	239 431	234 333	278 587

[1] These figures also include waste from third-party companies. [2] incl. Süd-Chemie

WASTE tons



[1] incl. Süd-Chemie

Waste data at each individual site is assigned to the respective producers and disposers and evaluated. Disposers are chosen responsibly and according to strict quality controls and checks. The checks are recorded and information exchanged between Clariant's different sites. The sum of these measures ensures continuous monitoring and control of all waste flows at the sites.

The total amount of waste produced by Clariant has been significantly reduced in recent years. After standing at around 303 000 metric tons in 2005, in 2012 the total declined to around 144 000 metric tons, with the amount decreasing continuously, also partly because of the decline in production. The relative trend, i. e., the amount of waste in relation to production volume, was also downwards. Thus, the amount of waste per metric ton of manufactured product fell in the aforementioned period by 40 % from 111 kg/t to 67 kg/t in the year under review (incl. Süd-Chemie: 54 kg/t). The waste amounts are recorded separately according to type and disposal method. The vast majority (more than 70 %) is recycled or treated, and only suitable waste is disposed of in landfills. Only officially-certified companies that specialize in the disposal of the waste-type concerned are commissioned to dispose of the waste.

No longer treatable materials such as fly ash from internal waste incineration and other manufacturing processes are disposed of in special landfills. The quantity of these substances is constantly falling thanks to improvements in the manufacturing process, thereby continually reducing the amount of waste. Clariant uses the term »waste« to refer to hazardous waste, household waste and excavated soil from construction sites.

As definitions vary quite widely around the world, the corresponding measured values are summarized under »total waste« to prevent distortions. Beyond these Clariant essentially does not release any other substances, and therefore there is no separate determination of them. The weights of the transported, imported, exported, and treated waste quantities are not recorded separately at group level.

IMPACT ON NATURE

Clariant is a chemical company with a longstanding history and production sites some of which more than a hundred years old. On account of the required infrastructure already being in place prior to construction, almost all Clariant's newer plants and office buildings are located in industrial parks or trading estates. Clariant does not operate any sites in biological reserves nor in areas with a high biodiversity value. With regard to plants located next to rivers, Clariant has laid down strict environmental regulations so that its activities do not have a registrable impact on the surrounding flora and fauna. The wastewater produced by Clariant in the year under review had no measurable impact on biodiversity.

Clariant mostly operates plants in integrated industrial sites without sensitive adjacent areas. If forests, which are generally unprotected areas, are located in the immediate vicinity, Clariant ensures that the nature of the plant and the activity carried out there does not have an appreciable adverse effect on the flora and fauna there. For this reason, no ongoing monitoring to determine such effects is carried out.

Since 2010, Clariant has been a partner in a project in Colombia that facilitates the use of water in the country and improves (drinking) water quality. The project is supported by several Swiss companies, with the project managers working in close coordination with the Colombian authorities. As part of this project, Clariant has since 2012 been driving forward the afforestation of the »Cerro de Manjui« mountains, which are located in a conservation area. This area, which is several hundred hectares large, has for many years been suffering from heavy deforestation and forest fires, as well as pine and eucalyptus plantations that are atypical for the local fauna. Clariant is now helping to identify the most affected areas and implement rapid reforestation. Besides careful coordination of this work, Clariant will in future also teach children and young people in schools in the surrounding communities both about the efficient and sensible use of water and environmental science.

As Clariant mostly operates plants in integrated industrial sites without sensitive adjacent areas, or where its plants are located next to rivers or unprotected forest areas they have no influence on the local fauna and flora, there is no requirement to draw up biodiversity management plans. Animal and plant species included on the Red List of the IUCN (International Union for Conservation of Nature and Natural Resources) and on national protection lists, i. e., those in danger of extinction, are not visibly affected by Clariant's business activities.

In order to prevent as far as possible any environmental impacts through the transportation of products and other goods and materials, Clariant has laid down strict rules to ensure transport safety – with the corresponding financial outlays. In accordance with statutory requirements, Clariant stores key information such as electronic-ordering and delivery-system classification and labeling data for each product in a database. All the parties in the transport chain are then informed automatically and the transport documents are issued with the hazardous-goods information prescribed by law. The selection and definition of suitable packaging for hazardous materials are also integrated into this IT solution.

Only experienced and reliable companies are used to store, pick, schedule and transport the goods. This ensures that staff, organization and equipment all comply with legal requirements. One tool used for this is Clariant's Forwarder Requirements Profile, which defines the requirements for reliable partnerships with forwarders. The security of dangerous-goods transport is critically dependent on the skill and care of the people involved. Regular task-related and ongoing training of Clariant employees contribute to overall security.

Work-safety officers conduct regular inspections of filling plants and dispatch areas. In addition, road vehicles and tankers carrying hazardous goods are checked at random before they leave the plant premises. When creating and implementing product-specific logistics solutions, transport safety is a key factor, for example, when bundling traffic flows and selecting the means of transportation.

For product responsibility reasons and as required by the EU REACH (Registration, Evaluation, Authorization and Restriction of Chemicals) regulation, Clariant is looking for potential improvements in the life cycle phases of its products. The properties of chemical substances are identified and user material and product safety tests simulated. REACH entered into force on June 1, 2007, and the purpose of the regulation is to ensure a high level of protection for human health and the environment, to improve communication when handling chemical products, and to maintain and improve the competitiveness of the chemical industry in the European Union.

EU-wide uniform and binding rules for the registration, evaluation, authorization and restriction of chemicals will mean that the chemical laws of the individual states will be harmonized and simplified. In particular, the regulation only permits chemical substances that have previously been registered and examined for possible risks to be introduced onto the market. Clariant meets the requirements of REACH in full.

Clariant has been intensively involved in the development of the REACH regulation through association activities and discussions with authorities, and has carefully prepared itself to meet the new requirements. Thanks to its preparation, resource provision, and comprehensive project planning, Clariant has successfully both pre-registered its product portfolio and registered the substances of Registration Phase 1.

REACH doesn't just mean having to engage in additional expenditure and staff training prior to registration; it also provides the company with an opportunity to differentiate itself in the market. This is because REACH contributes significantly to further improving health, environmental and consumer protection. Clariant through REACH offers its customers more value and support through increased communication and customer-oriented detailed information on the use of its products. With REACH, stronger customer and supplier relationships can be achieved, additionally enhancing sustainable business development. The regulation is also a catalyst for the development of new and better products. Clariant will therefore take advantage of this opportunity and the positively regarded »REACH-registered« label, which is synonymous with and a guarantee of comprehensive product responsibility, and will be clearly demarcated from chemicals originating in countries with lower standards.

One of the aims set by the UN Conference on Environment and Development in Rio de Janeiro in 1992 was global harmonization of the classification and labeling of chemicals. The »Globally Harmonized System of Classification and Labelling of Chemicals« (GHS) has created the basis for international harmonization of existing classification and labeling systems from different sectors such as transport, consumer, worker and environmental protection. Following a regulation on the classification, labeling and packaging of substances and mixtures (CLP), GHS has now been introduced in the European Union. Based on this regulation, Clariant has classified over 2 500 substances, defined new label elements and applied to the European Chemicals Agency (ECHA) for their inclusion in the publicly-accessible classification and labeling online directory.

USE OF PACKAGING MATERIAL

To keep the environmental impact of the packaging in which products are delivered to customers as low as possible, reusable packaging is used wherever possible. Once the product has been emptied at the customer's premises, the packaging is then sent back for refilling. Other used packaging materials are returned in part and systematically recycled. However, Clariant generally does not supply end customers, only processors. Thus, many products (so-called bulk products) can be shipped in tank trucks and cars. Moreover, cleanable and reusable packaging is used where possible and acceptable to the customer. In a number of cases, however, customer requirements or other factors mean that packaging has to be used that is not immediately reusable.

Experience has shown that the handling of non-reusable packaging material made of steel and plastic varies from country to country. For example, in Germany most products are transported in silos, tankers and reusable packaging. Most products supplied in non-reusable packaging are exported to other European countries. Packaging wherever possible is recycled for material purposes or, especially in the case of hazardous materials, is used to generate energy.

For optimal implementation of these measures, Clariant, when purchasing globally, prefers to work with international packaging manufacturers. The international standardization process is further promoted by these partners and their networks. At the same time,

reuse and recycling are now being promoted and implemented throughout the world in non-European markets by established and soon-to-be established recycling systems.

The packaging used by Clariant meets the requirements of customers and legal requirements and ensures product quality. Clariant participates in programs for the return of packaging for safe incineration or disposal. All new packaging products are analyzed for their degree of risk and compliance with European Union regulations. Various internationally-recognized methods are used to examine existing products. In 2012, Clariant made 900 000 deliveries to customers. In 0.03 % of these deliveries the packaging proved inadequate or became wet, in 0.9 % the packaging was damaged and in 0.01 % it was leaking.

ENVIRONMENTAL INVESTMENTS

In 2008 and 2009, the impact of the economic crisis was visible, with environmental expenditure and investments stagnating or even decreasing. In 2010, however, the investment amounts once again slightly increased. In 2011, investment volumes were influenced by the effects of special programs (such as opening new sites, production relocations, etc.) and associated environmental investment expenditure. In 2012, environmental investments increased to more than CHF 10 million (incl. Süd-Chemie: CHF 13 m). The total expenditure for safety, environmental protection and health in 2012 totaled approximately CHF 90 million (incl. Süd-Chemie: more than CHF 100 m).

IX. Personnel development

Responsibility means first and foremost Clariant's responsibility towards its employees. Clariant is aiming for an organizational structure that is diverse in terms of the strengths and characteristics of its employees. Clariant employs and promotes employees solely on the basis of their qualifications and skills for the work to be carried out and does not discriminate in any way. Whether a candidate is appointed to a particular position is determined by their suitability for the vacancy and whether their individual future potential is in line with Clariant's corporate strategy and objectives. Internal candidates with equal qualifications are given priority over external applicants.

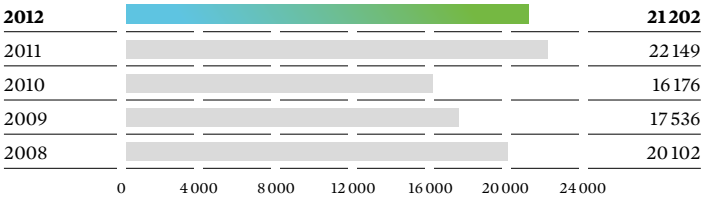
Clariant's »People Excellence« program ensures that the right people are available at the right time for the right position. The aim of People Excellence is primarily to improve the training of employees by providing them with the necessary skills and resources as well as the necessary freedom. In order to secure these improvements in the long term, Clariant intensively promotes succession planning and talent management. Clariant offers suitable training programs for employees to improve their employment opportunities, thereby promoting the innovative and future-oriented development of Clariant as an international specialty chemicals company (see also page 11).

In addition, Clariant is committed to paying its employees fair and appropriate compensation in the form of wages and salaries, social components and other perks. This compensation should in each country in which Clariant is active meet minimum statutory standards and in principle exceed them.

EMPLOYEE STRUCTURE

At the end of 2012, Clariant employed 21 202 full-time equivalent employees.

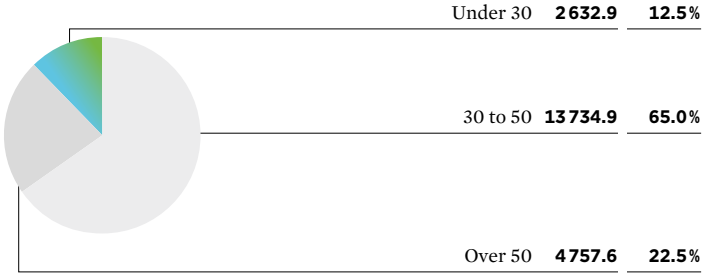
TREND IN FTES (ON 31 DECEMBER) – FIVE-YEAR OVERVIEW



EMPLOYEES BY AGE IN 2012

Data based on full-time equivalents (FTEs)

Total: 21 125.3



EMPLOYEE STRUCTURE OF CLARIANT IN 2012

Data based on full-time equivalents (FTEs)	Total	in %
Employees	**21 202.1**	**100.0**
Employment relationship		
Permanent	20 816.9	98.2
Men	16 600.5	78.3
Women	4 216.4	19.9
Full-time	20 444.1	98.2
Men	16 539.2	79.5
Women	3 904.9	18.8
Part-time	372.9	1.8
Men	61.3	0.3
Women	311.6	1.5
Temporary employees	385.2	1.8
Men	267.1	1.3
Women	118.0	0.6
Type of employment		
Salaried	12 288.6	58.0
Men	8 584.0	40.5
Women	3 704.6	17.5
Hourly	8 913.5	42.0
Men	8 283.6	39.1
Women	629.9	3.0

A project was launched at the end of 2012 with the aim of studying the way in which various national regulations and requirements regarding the registration of new and departing employees can be integrated in a global reporting system. The aim of these activities is, from 2014 onwards, to record fluctuation data in accordance with a harmonized system that is compatible with various national and global reporting requirements, with a view to preparing fluctuation analyses at Group level.

Staff representative agreements cover around half the workforce, although managerial positions are generally not included in such agreements. In the event of operational changes (such as plant closures) Clariant works closely with employee representatives and employees. Intentional differentiation in the company benefits provided by Clariant according to the type of employment contract does not take place, but this does not exclude differences depending on the individual case and local circumstances. However, a systematic survey has yet to be undertaken.

EMPLOYEES

Data based on full-time equivalents (FTEs)

Total: 21 202.1

Men **16 867.6 (79.6 %)**

Women **4 334.5 (20.4 %)**

Full-time **20 823.1 (98.2 %)**

Part-Time **379.0 (1.8 %)**

With a view to providing parents of newborn babies with the opportunity to combine work and private life, without sacrificing career opportunities within the company, Clariant introduced a »Family Support Policy« in 2012. The corresponding guidelines apply globally, and across all Business Units and areas; they guarantee among other things that a suitable position will be provided to a returning mother within one year of the birth or adoption of a child. After returning to work, mothers also are granted ten additional paid vacation days for two years following the birth of adoption of a child, to support the smooth transition back into the labor market. Fathers can also take advantage of this provision. This program only started in the spring of 2012, and therefore meaningful conclusions about its use will only be possible after publication of the 2013 Sustainability Report. See also the article »Demography Management« on page 57.

EMPLOYEES WORLDWIDE

Nationality	FTE	in %
Total	**21 202**	**100.0**
German	5 156	24.3
Chinese	1 793	8.5
Brazilian	1 523	7.2
Indian	1 169	5.5
French	1 152	5.4
Indonesian	912	4.3
Italian	830	3.9
Spanish	745	3.5
Mexican	677	3.2
South African	443	2.1
Turkish	426	2.0
Swiss	361	1.7
Pakistani	342	1.6
Japanese	308	1.5
Thai	297	1.4
Columbian	281	1.3
Argentinian	265	1.2
Ukrainian	261	1.2
Malaysian	208	1.0
British	202	1.0
Venezuelan	183	0.9
Chilean	128	0.6
Singaporean	103	0.5
others[1]	3 437	16.2

[1] includes all employees in US and Canada, for whom no nationality data is recorded

Employees are promptly informed of all significant operational changes by the company. In addition to the regular and ad hoc information provided to all employees via the intranet, the company complies with all local statutory and operational requirements as regards the provision of information to employee representatives and employees. Moreover, voluntary corporate information sessions are regularly held.

OCCUPATIONAL SAFETY

The health of employees is a primary concern for Clariant. For this reason, Clariant offers discounted health programs at various sites, and attaches great importance to protecting employees from workplace accidents. In the year under review, Clariant launched the Clariant Employment Policy, which governs such rules at the global level.

The level of work safety is essentially determined by line managers. They are responsible for training employees in safety, and determine through their own behavior the extent to which employees identify with such training. This being the case, AvoidingAccidents@Clariant first and foremost imposes duties and obligations on executives and managers. At the end of 2012, the program was implemented internationally at 80 production sites worldwide. More sites will be included in the coming years, depending on their size and the accident rate.

The results are discussed with the responsible managers at the site and concrete implementation plans agreed. At the same time, the site managers undertake to implement the goals of AvoidingAccidents@Clariant. Appropriate training in the form of Awareness Workshops then prepares managers for the necessary changes. To this end, Clariant employs 30 occupational-safety trainers worldwide. In 2013, another 10 or so will be appointed.

The implementation of training of this type is also a clear signal by the local management that it wishes to improve workplace safety. Employees learn how to behave more safely and prevent accidents from happening, with managers also involved, and a strong emphasis placed on the idea of »leading by example«. Safety is first and foremost a question of sensitivity to the dangers surrounding one's own work. For this reason, exemplary conduct and regular training is a must for managers and all employees.

Around 7 % of Clariant's global workforce (excluding executives) sits on work committees, which deal with safety issues. There are however large differences between the individual countries due to the varying national regulations. This figure comprises only the occupational safety meetings required by law. Many other safety meetings are held, for example, during audits or as part of the AvoidingAccidents@Clariant program.

WORK ACCIDENTS AND INJURIES

Efforts to prevent accidents at work are an essential part of Clariant's production activities and require continuous motivation of employees by line managers. The Clariant Employment Policy launched in the year under review governs such rules at a global level. Clariant launched the AvoidingAccidents@Clariant program, which aims at reducing the number of accidents and consequences, as far back as 2007. The result of this program and related efforts is reflected in the declining number of accidents. From 2012 onwards, it now also covers additional areas following the acquisition of Süd-Chemie. These areas have historically had a higher risk of injury than at Clariant. The introduction of AvoidingAccidents@Clariant in these new areas is already producing results through declining accident

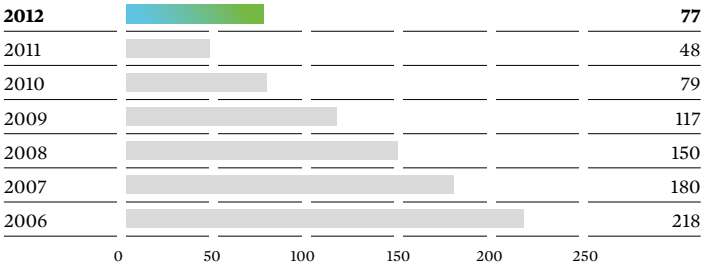
numbers. Overall, the numbers continue to remain low in industry comparisons (see also the article »AvoidingAccidents@Clariant« on page 44).

Thus, in 2012 a total of 77 work accidents (involving 73 men and four women) resulting in lost time of more than a day took place at Clariant sites. This number signifies an increase compared to 2011, when only 48 accidents occurred. However, this is primarily due to the higher number of employees compared to the previous year. Overall, however, a significant improvement has been achieved in the six years in which AvoidingAccidents@Clariant has been running, as before the program the number of accidents was over 200 a year.

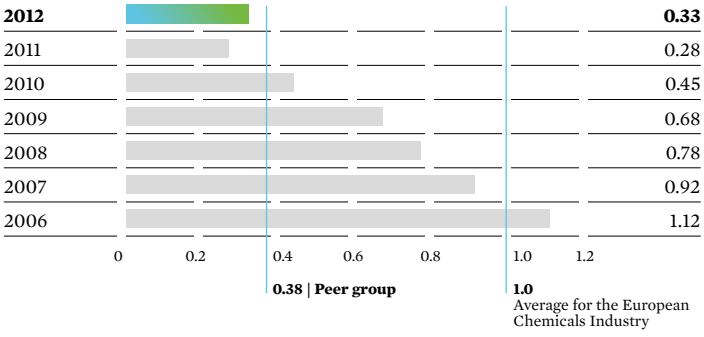
NUMBER OF OCCUPATIONAL ACCIDENTS WITH AT LEAST ONE DAY'S WORK LOST by regions

	Men	Women	**Total**
Total	73	4	**77**
Europe	34	4	**38**
Greater China	7	0	**7**
India	2	0	**2**
Japan	0	0	**0**
LATAM	10	0	**10**
MEA	9	0	**9**
NORAM	5	0	**5**
SEAP	6	0	**6**

NUMBER OF OCCUPATIONAL ACCIDENTS WITH AT LEAST ONE DAY'S WORK LOST Accidents



NUMBER OF OCCUPATIONAL ACCIDENTS IN RELATION TO OUTPUT LTAR



LTAR = Lost Time Accident Rate (the ratio of the number of occupational accidents where at least one day's work was lost to every 200 000 hours of work)

However, periods of absence following accidents also lengthened in 2012, but in 2013 AvoidingAccidents@Clariant is likely to once again lead to an appreciable reduction in accident-induced down-time. The Group's »Lost Time Accident Rate« (LTAR) increased for the first time since 2006 in the year under review, from 0.28 in 2011 to 0.33, although in 2010 it stood at 0.45. Before the introduction of AvoidingAccidents@Clariant the rate was above one. LTAR refers to the number of accidents with lost work time of at least one working day per 200 000 operational working hours.

DAYS LOST DUE TO ACCIDENTS AT WORK

	2012	2011	2010	2009	2008	2007	2006
Days	**1 431**	1 115	1 188	1 931	2 182	3 128	4 038
LWDR	**6.2**	6.5	6.8	11.2	11.3	15.9	19.6

LWDR = Lost Workday Rate (the ratio of the number of days lost due to accidents at work to every 200 000 hours of work)

NUMBER OF RECOGNIZED OCCUPATIONAL DISEASES/DEATHS

	2012	2011	2010	2009	2008	2007	2006
Occupational diseases	**1**	5	7	9	9	9	10
Fatal accidents[1]	**0**	0	1	0	2	0	1

[1] incl. accidents unrelated to work with chemicals, such as road accidents

At the same time as the developments outlined above, the number of days lost per year through accidents at work days has risen from 1 115 in 2011 to 1 431 in the reporting period, but is still well below the figure of 4 038 in 2006. Simultaneously, the »Lost Workday Rate« (LWDR, i. e., the number of workdays lost due to accidents at work per 200 000 working hours) fell from 6.5 to 6.2. No deaths for operational reasons were recorded in 2012. One male employee suffered a newly-registered occupational disease in the period under review.

The improvements in accident numbers obtained with AvoidingAccidents@Clariant and the overall extremely low accident level demonstrate the success of the extensive and continuous activities carried out to prevent accidents and limit potential effects. Nevertheless, in the future the efforts made to ensure that employees pay attention to safety at the workplace will need to be continued and increased further so that the achieved safety level is maintained permanently.

In 2012 in a pilot project at its Indian plants, Clariant examined the frequency of accidents and downtime not only of its own employees but also of temporary workers. The determined LTAR for the employees in India was 0.2 and for the temporary workers just 0.12. The figures still need to be rendered comparable, because fluctuation rates among temporary workers are quite high and thus analysis of the accident times is difficult. Despite this, from 2013 Clariant will record all employee accidents within production plants worldwide, regardless of whether the employees in question are permanently or temporarily employed.

By introducing the AvoidingAccidents@Clariant program, Clariant has succeeded as part of active prevention management in significantly reducing the number of industrial accidents and occupational diseases in recent years. The basis for the accident prevention program is comprehensive analysis of the causes of accidents at Clariant. This study confirmed previously known facts: only 5 % of all accidents can be attributed to technical problems. The main cause of accidents, at 75 %, is conscious and unconscious misconduct, both of employees and line managers. Clariant has decided to act first in relation to conscious misconduct, and ongoing training and information provision have raised awareness within the workforce in this respect.

Moreover, the study revealed the little-known fact that in around 20 % of cases, missing or inadequate organizational preventative measures or a lack of exemplary behavior by line managers were the cause of the accident. This being the case, AvoidingAccidents@Clariant first and foremost imposes duties and obligations on executives and managers. In addition, the health of Clariant employees is regularly examined. Depending on the workplace, extensive health checks are sometimes carried out in order to detect signs of disease as early as possible. For some activities, special health certificates and vaccinations are required, and special attention is paid to ensuring that these are obtained and given. With these programs Clariant already goes far beyond legal requirements, and therefore no formal commitment to third parties is required.

CORPORATE TRAINING AND PERFORMANCE APPRAISAL

Clariant considers it important that its employees have the opportunity to realize their potential and develop a successful career. In addition, Clariant believes that motivating and training its employees will contribute significantly to the company's success. For this reason, Clariant offers its employees, based on the principle of equal treatment and equal rights, internally- and externally-conducted specialist and interdisciplinary training and qualification measures. The Clariant Employment Policy, launched in the year under review, regulates this on a global level.

Each individual employee is supported in terms of their ability and desires, their efforts as regards the quality of their work and compliance with environmental, safety and health protection laws and regulations, both individually and within teams. Global consolidation of the educational and training programs according to scope and employee group or gender has not taken place as yet. No reliable indication of the average scope of the training can be given with the currently available information. Clariant is considering the feasibility of the central controlling of training measures, including the global recording of the related data. In December 2012, the investment decision for the project announced in last year's report aimed at expanding the reporting system was postponed to the fourth quarter of 2012 due to the planned major changes to the Clariant organization. As a result of this decision, the data for the global consolidation of training and qualification measures will not yet be available for the 2013 reporting year.

Clariant promotes further training and provides young people with sound apprenticeships. An essential tool for customizing the training measures offered is the internal talent management process at the local, regional and global levels. During Talent Reviews, strengths and development areas are systematically identified and individual development plans drawn up. One of the aims of the »360-degree feedback process« and the annual »Performance Dialog« is to reflect the ongoing development potential of employees and agree on appropriate development goals and activities.

Clariant considers the continuous training of employees within the framework of the internal talent management process important as it ensures well-functioning succession planning within the company. The Clariant Employment Policy, launched in the year under review, provides the basis for this. In 2013, Clariant founded its own »Academy« at which employees can receive training in key professional and business fields (see page 11).

In 2012, Clariant introduced a new comprehensive performance management process for its employees. Over the course of the year, 920 individuals in the top five management levels were registered, i. e. around 4.3 % of the total workforce. During 2013 a further 140 individuals in the top five management levels, as well as approx. 4 000 individuals at lower levels will be included, so that around 24 % of all employees will have undergone a comprehensive performance assessment by the end of the year. The Performance Management System focusses on the following levels: defining and evaluating individual objectives throughout the year, talent management and development plans, as well as the implementation of corporate values and conduct. From 2014 onwards, the entire workforce will be gradually included in the program.

COMPENSATION STRUCTURES

Not giving rise to differences in the basic salaries of men and women is something that is firmly anchored in the Clariant Employment Policy. Nevertheless, discrepancies can occur in individual cases and the data currently available do not permit global transparency. 2011 saw Clariant develop and introduce new data recording and reporting standards in HR management. These standards are gradually being extended out across the entire Group. Representative results and findings obtained from these are expected during the course of 2013, and it will then be possible to make detailed statements concerning salary and wage structures at Clariant for this year.

X. Adherence to human rights

Clariant is aware that a varied workforce is of great value to the company. Consequently, Clariant does not tolerate any discrimination based on the race, ethnicity, sex, religion, world view, a disability, age or sexual identity of employees – neither within the company, nor at its business partners. None of Clariant's national companies has reported any breaches of this principle to date. In order to document its societal commitment Clariant has also adopted a workplace directive (»Clariant Employment Policy«) on these issues.

MONITORING HUMAN RIGHTS ISSUES

Clariant respects human rights and rejects any form of coerced, compulsory and child labor. To date, Clariant is not aware of such business practices. In order to document its societal commitment Clariant also adopted a workplace directive on these issues in 2012. Clariant also demands the same standards from its suppliers, and has laid this down in its Code of Conduct for Suppliers that was approved in 2012 and also explicitly includes human rights issues. Trade union freedom of assembly and the right to collective bargaining as well as compliance with the goals of the International Labour Organisation (ILO) are a matter of course for Clariant. This claim by Clariant can be seen in the General Terms and Conditions of the corresponding Clariant agreements.

No Clariant Business Unit has had to place its operations under special scrutiny in terms of human right breaches or re-evaluate business relations in this regard. Clariant is not aware of such occurrences. Neither have the rights of indigenous peoples been breached. Fair and respectful interaction amongst Clariant's employees and with those outside the company is a given. Clariant is not aware of any occurrences, work-related incidents or business transactions in the company which are the focus of investigations concerning the violation of human rights – which is why Clariant has not yet provided any such training in the field of human rights.

Sustainability aspects such as human rights, environmental protection, reliability of processes, accident prevention and safety at work are already part of the General Terms and Conditions. In the reporting year Clariant adopted the »Code of Conduct for Suppliers« (see also the report on page 9), which will be applied from 2013. This contains a truly comprehensive list of requirements from the perspective of sustainable management and on the basis of »clean« commerce which are essential for Clariant's future business relations with other companies. It will then be possible to provide information on any relevant findings in the field from 2013.

Clariant rejects any form of child labor with the aforesaid workplace directive and strictly complies with local regulations concerning legal minimum age requirements for work permits. ILO conventions numbers 138 and 182 are expressly acknowledged as the minimum standard here. Clariant is not aware of cases of child labor in the company and this is also true of the situation at its key suppliers. Similarly, Clariant rejects any form of coercive or enforced labor. Nor is Clariant aware of any cases of coercive or enforced labor in the company.

Clariant currently has no Group-wide notification and reporting system in the event of legal actions or complaints in respect of human right breaches. However, in 2011 plans were started for one such global system. So far only the locations in South Africa, Malaysia and Australia have introduced a formalized data recording system for legal actions on account of human rights breaches and only in the event of complaints from employees. In 2012 Clariant had no internal complaints on account of breaches of human rights issues.

DISCRIMINATION BAN

In its Code of Conduct Clariant prohibits any form of discrimination based on race, religion, background, sex, disability, age, marital status, sexual orientation or membership of a union or political parties. In addition, the Code of Conduct stipulates that the provisions concerning equality between men and women must be observed, whereby equality, in particular, includes areas such as allocation of responsibilities, remuneration, training and development and promotion.

In the period under review Clariant recorded three charges relating to discrimination. These accusations came from the United States and are being investigated in accordance with the domestic rules of the EEOC (Equal Employment Opportunity Commission). The results of these investigations are not yet available.

Clariant shall take all reasonable measures in order to prevent discriminatory behavior. All employees are requested to report cases of discrimination observed in their work environment to line managers, HR department/services or internal welfare office. They can also approach the compliance function for legal support. Clariant assures employees affected the necessary support. Employees who adopt discriminatory practices and line managers who tolerate such in their work environment must deal with the prospect of internal sanctions and also consequences under civil and criminal law.

Clariant respects as part of freedom of association the right of the entitled employees to join unions and to be represented by representatives from these unions internally and externally in accordance with the prevailing national or local laws and practices. Clariant knows of no cases in which freedom of association or the right to collective bargaining have been seriously jeopardized or even breached.

XI. Social responsibility

At Clariant, sustainability does not focus on individual showcase projects; the company is actively committed to the common good in each and every location in which the Group operates, acting with corporate responsibility in all its activities. Clariant is involved in numerous (infrastructure) projects in the vicinity of the various production sites, in particular in emerging markets. For example, in 2012 Clariant participated in the construction of a river bridge in Tegal Datar in Indonesia, around 150 kilometers from the capital Jakarta. The first bridge across the river in the area, the initiative will now save the 500 residents of the village a 4-km detour each time they cross. Systematic logging of all Clariant's global relief work is not yet available but will be initiated from 2013.

AVOIDANCE OF CORRUPTION

Corruption risks are investigated as part of ongoing internal auditing by Clariant. As a result of these investigations, some contracts with business partners have, in the past, been terminated, not extended or amended accordingly as a precaution. The pilot project originally scheduled for 2012 for a systematic »corruption risk analysis« carried out with external assistance has been postponed until 2013. One or two Business Units will take part in the pilot project.

Clariant has continued training throughout the entire organization in the year under review – specifically also in relation to possible cases of corruption. The fight against corruption is being dealt with in e-learnings and in-person meetings, whereby all Clariant employees belong to the target group of one of the two training course types. The number of employees who have an e-mail address and have completed an e-learning training course in the field of Code of Conduct is in excess of 90 %; the number of employees with an e-mail address who have completed an e-learning training course focused on conflicts of interest is around 90 %. A breakdown according to management and non-management members is currently not possible.

If corruption is suspected, Compliance and the Internal Audit Department will carry out an investigation, with the help of specialist third parties, if necessary. The Compliance Committee at Group level reviews the findings of the investigation and orders disciplinary and other measures in relation to culpable employees which also can lead to the termination of the employment relationship.

If the corruption was caused by or with the involvement of third parties such as agents, distributors, advisers or suppliers, etc. the business relationship with the culpable third party will be terminated immediately and not taken up again. Further organizational adjustments will be ordered by the Compliance Committee if required in order to prevent similar cases in future. Of the 41 reported breaches of Code of Conduct, there was a suspicion of corruption in two. Of these two reports one is still under investigation; for the other case the investigation has been concluded and the contractual relationship terminated with a supplier. No disciplinary measures relating to corruption were imposed against Clariant employees.

INFLUENCE ON POLITICAL DECISIONS

Clariant is unbiased in terms of party politics. Clariant is involved in industrial policy either via associations or together with policymakers and neighbors. On June 1 2007 EU regulation REACH (Registration, Evaluation, Authorization and Restriction of Chemicals) came into effect. Clariant has been intensively involved in the development of the REACH regulation through association activities and discussions with authorities, and has carefully prepared itself to meet the new requirements. Clariant is a member of the European Chemical Industry Council (Cefic) and is committed to sustainability in the framework of the International Chamber of Commerce. Donations to parties, politicians and associated institutions have not been passed on by any of the national companies.

VIOLATIONS AGAINST LAWS AND REGULATIONS

Clariant was not aware of any cases in the year under review in which Clariant has been accused of not having acted essentially in compliance with laws, regulations and voluntary codes of practice. Consequently, no corresponding fines or non-monetary penalties for failure to comply with legal regulations are known either. Clariant attaches particular importance to fair interactions with competitors, suppliers and customers. In the year under review then there were no legal cases of anti-competitive conduct, the forming of cartels or monopolies and also no legal actions or complaints concerning compliance with legal provisions on unfair competition. Clariant did not have to pay significant fines or issue non-monetary penalties for failure to comply with legal regulations in the environmental sphere in 2012.

XII. Product stewardship

Clariant has developed product safety and production safety guidelines involving the impact of its business operations on health, safety and the environment (HSE). The most important goal within the scope of activities is the protection of humans and the environment. For this the company has devised a comprehensive raft of rules and measures within ESH management and introduced a Group-wide risk assessment system. Regular employee training courses are held. Similarly, the processes, procedures and measures are continually monitored via internal and external checks.

The principle of sustainable corporate development is firmly entrenched at Clariant, be it in production, transportation and distribution or in the use of products and services. As a leader in the specialty chemical industry, Clariant goes beyond legal requirements and participates in several voluntary sustainability programs, including voluntary commitments as part of Responsible Care® under the Global Responsible Care Charter and Global Product Strategy. The aim of the programs is to continually improve company performance for health, safety, and environmental protection as well as product quality from the point of view of sustainability aspects. Here, as well as optimizing product features relevant to safety and the environment it is also about communication with the customers and other stakeholders.

For Clariant product responsibility is a key part of the overall company strategy. Responsibility for consumer protection and environmental protection in product application assumes top priority. Clariant's commitment and professional service as part of product responsibility bring customers substantial added value and the guarantee that Clariant's products satisfy aspects of sustainability. See also EcoTain, page 20.

GUIDELINES CONCERNING PRODUCT SAFETY AND PRODUCTION SAFETY

The aim of the programs described above is to continually improve company performance for health, safety, and environmental protection as well as product quality from the point of view of sustainability. Here, as well as optimizing product features relevant to safety and the environment it is also about communication with the customers and other stakeholders. In its pursuit of the highest possible level of transparency, Clariant published documents such as position papers on animal testing and nanomaterials in 2012. These documents can be downloaded from the company's Website (www.sustainability.clariant.com).

There were no instances – neither offences nor criminal investigations – on account of breaches against applicable law and voluntary codes of practice in relation to information about the labeling of products and services.

Clariant maintains permanent contact with customers. These customers are supported in the application and use of Clariant products. Laboratories are available for specific problems. The service offering also features comprehensive product information, in particular in respect of optimum and safe application, health risks, waste disposal and handling packaging.

Safety data sheets containing the relevant substance data, information on safe handling and storage of products and measures in the event of incidents such as product spillages/release or fire are provided by Clariant to all parties involved in the further handling of the substances.

Clariant provides customers with a special Internet-based REACH Dialog System (RDS) for information about the supply chain. Here, every Clariant customer can receive REACH-relevant information on the products purchased individually and securely. The purpose of the system is also to satisfy the stringent REACH communication requirements concerning the use of products. Here, the users of Clariant products in the customer chain can check and, if necessary, supplement or change their REACH-relevant information provided by Clariant promptly and reliably.

Clariant therefore provides the customers with a system in order to ensure that relevant information is communicated simply and completely in the customer chain. This system is constantly being improved, simplified and adjusted in line with legal requirements – to which there have been positive reactions from customer groups and this is also in compliance with the recommendations of national and European associations.

VIOLATION OF RULES, REGULATIONS AND LAWS

Clariant is not aware of any occurrences in which there have been infringements of laws concerning the supply and use of products and services. To ensure that Clariant products do not »end up in the wrong hands« and, for example, get misused for the production of chemical weapons, they are subject to strict control. The plant inspection officer (in accordance with the United Nations Chemical Weapons Convention) and the export control officer make sure that Clariant products from the plants are only supplied in permitted nations for the purpose of a civil reuse.

There were no occurrences – neither offences nor criminal investigations – on account of breaches against applicable law and voluntary codes of practice in relation to information about the labeling of products and services. There were also no legal actions or complaints concerning compliance with legal provisions on unfair competition. Clariant attaches particular importance to fair interactions with competitors, suppliers and customers. In the year under review then there were no occurrences or legal cases of anti-competitive conduct and no complaints for breach of protection of customer data. Similarly, Clariant is not aware of any occurrences in which there have been infringements of laws/regulations in terms of the procurement, use or supply of products and services.

XIII. Contact

Contact partner for Clariant sustainability topics:
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Daniel Kaufmann
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External Confirmation

Swiss Association for Quality and Management Systems (SQS)

Validation of Sustainability Reports

Validation by SQS

The 2012 Sustainability Report of Clariant Ltd. was audited by SQS. The non-financial information in the report was examined by means of evidence and a sample-based audit was performed on site. In particular, SQS checked whether

- the report addresses all essential aspects relevant to reporting about sustainability;
- the data collection is appropriate and reliable;
- the statements in the report are understandable and accurate and agree with the collected data; and
- the report is prepared in accordance with GRI requirements *).

On the basis of the audited data and information, we confirm that the content of the 2012 Sustainability Report was carefully prepared and the published information and quantified statements present an accurate and realistic picture.

Zollikofen, March 7, 2013

The auditors Dr. Silvio Leonardi Lea Moser

*) Validation of the report was performed by qualified and impartial auditors of SQS, applying a systematic, documented and evidence-based approach, and checking the balance and veracity of the report's contents as well as adherence to the framework and principles of GRI; the self-declared application level may optionally be confirmed through GRI. Except for its role as validator and certifier, SQS has no business relationship with the company.

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Statement
GRI Application Level Check

GRI hereby states that **Clariant AG** has presented its report "Sustainability Report 2012" to GRI's Report Services which have concluded that the report fulfills the requirement of Application Level A+.

GRI Application Levels communicate the extent to which the content of the G3 Guidelines has been used in the submitted sustainability reporting. The Check confirms that the required set and number of disclosures for that Application Level have been addressed in the reporting and that the GRI Content Index demonstrates a valid representation of the required disclosures, as described in the GRI G3 Guidelines. For methodology, see www.globalreporting.org/SiteCollectionDocuments/ALC-Methodology.pdf

Application Levels do not provide an opinion on the sustainability performance of the reporter nor the quality of the information in the report.

Amsterdam, 7 March 2013

Nelmara Arbex
Deputy Chief Executive
Global Reporting Initiative

A+
GRI REPORT
GRI CHECKED

The "+" has been added to this Application Level because Clariant AG has submitted (part of) this report for external assurance. GRI accepts the reporter's own criteria for choosing the relevant assurance provider.

The Global Reporting Initiative (GRI) is a network-based organization that has pioneered the development of the world's most widely used sustainability reporting framework and is committed to its continuous improvement and application worldwide. The GRI Guidelines set out the principles and indicators that organizations can use to measure and report their economic, environmental, and social performance. www.globalreporting.org

***Disclaimer:** Where the relevant sustainability reporting includes external links, including to audio visual material, this statement only concerns material submitted to GRI at the time of the Check on 4 March 2013. GRI explicitly excludes the statement being applied to any later changes to such material.*

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This report contains forward-looking statements based on current assumptions and projections made by management. Such statements are subject to known and unknown risks, uncertainties and other factors which may cause the actual results and performance of Clariant International Ltd to differ from those expressed in, implied or projected by the forward-looking information and statements. The information published in this report is provided by Clariant International Ltd and corresponds to the status as of the date of publication of this report.

Disclaimer
Clariant International Ltd published Annual Reports in English and German. The German version is legally binding.

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Glossary

Additive
A substance added to products in small quantities to achieve certain properties or to improve a product (Clariant Additives Business Unit).

Adsorbents
Usually solid substances which are able to selectively accumulate certain substances from adjacent gaseous or liquid phases (Clariant Functional Materials Business Unit).

Business Unit
Clariant consisted of 11 Business Units at the end of 2012: Additives; Catalysis & Energy; Emulsions, Detergents & Intermediates; Functional Materials; Industrial & Consumer Specialties; Leather Services; Masterbatches; Oil & Mining Services; Paper Specialties; Pigments; Textile Chemicals.

Clariant Excellence
Clariant Excellence is an initiative launched in March 2009 with the aim of establishing a culture of continuous improvement. The initiative is based on a change in mindset among all employees and at all levels of the company. It aims to improve competitiveness through gains in efficiency and to create added value. The four elements of Clariant Excellence are: Operational, Commercial, People, and Innovation Excellence.

CO_2
Carbon Dioxide

CO_2 equivalent
CO_2 equivalent is a parameter describing the effect of greenhouse gas emissions. A factor known as the global warming potential (GWP) shows the effect of the individual gases compared with CO_2 as the reference value.

Compliance
Compliance is a key element of Corporate Governance. It refers to compliance with the law and directives as well as with voluntary codes within the company.

EBIT
Earnings before interest and taxes.

EBITDA
Earnings before interest, taxes, depreciation, and amortization.

Executive Committee
Management body of joint-stock companies; at Clariant the Executive Committee currently comprises four members

R&D
Research & Development

Full time / Part time / FTE
Full time / Part time status has been derived from FTE per employee as follows: >/= 0.90 FTE has been defined as full time employment, < 0.90 FTE as part time

Global Product Strategy (GPS)
The Global Product Strategy aims to establish global product stewardship standards and practices for companies. The program, initiated by the International Council of Chemical Associations (ICCA), strives to ensure the safe handling of chemicals by reducing existing differences in risk assessment.

ISO
International Organization for Standardization

Lost days
Lost days in which an employee is absent from work due to a work-related injury or illness.
They do not include:
1. the initial day of injury or illness,
2. any days on which the employee would not have worked even though able to work (i. e. holidays, weekends with no scheduled work, etc.).

LTA
Lost Time Accidents

LTAR
Lost Time Accident Rate (the ratio of the number of occupational accidents where at least one day's work was lost to every 200 000 hours of work)

LWDR
LWDR = Lost Workday Rate (the ratio of the number of days lost due to accidents at work to every 200 000 hours of work)

Materiality Matrix
Presentation of relevance of pertinent topics for Clariant's stakeholders

OHSAS 18001
The Occupational Health and Safety Assessment Series (OHSAS) comprises, among other things, the standard OHSAS 18001 which includes a management system for occupational safety. This system can be integrated into an existing quality and environmental protection management system and certified accordingly.

Pigment
Pigments are substances used for coloring; they are used in a technical manner, for example in the manufacture of dyes, varnishes, and plastics (Clariant Pigments Business Unit).

REACH
REACH is an E.U. regulatory framework for the registration, evaluation and authorization of chemicals.

Responsible Care®
Responsible Care® refers to a worldwide initiative by the chemical industry to continuously improve its performance in the fields of environmental protection, health and safety.

Stakeholder
Stakeholders are people or groups whose interests are linked in various ways with those of a company. They include shareholders, business partners, employees, neighbors, and the community.

Value Chain
The value chain describes the series of steps in the production process, from raw materials through the various intermediate stages to the finished end product.

Financial
SUMMARY

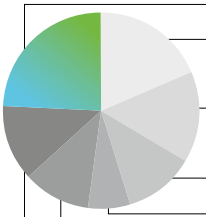
KEY FIGURES in CHF m

	2012	2011
Sales[1]	**6 038**	5 571
EBITDA before exceptionals[1]	**802**	835
EBITDA margin before exceptionals (%)[1]	**13.3**	15.0
EBIT before exceptionals[1]	**531**	624
Net income	**238**	251
Basic earnings per share[1]	**0.70**	0.77
Operating cash flow[2]	**468**	314
Investment in property, plant and equipment	**311**	370
Research & Development costs[1]	**175**	140
Total assets	**9 525**	9 105[3]
Equity	**3 040**	3 026
Equity ratio (%)	**31.9**	33.3
Net financial debt	**1 789**	1 740
Gearing ratio[4] (%)	**59**	58
Employees	**21 202**	22 149

[1] Continuing operations (see note 1.04 in the Financial Report)
[2] Starting from 2012, interest paid and received are reported as part of financing cash flow. 2011 number has been restated accordingly.
[3] Restated (see note 1.03 in the Financial Report)
[4] Net financial debt to equity

SALES BY BUSINESS UNIT in CHF m

Total 2012: 6 038

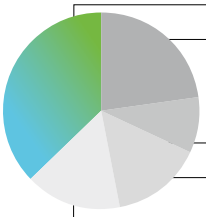


Industrial & Consumer Specialties	**1 474**	**24%**
Masterbatches	**1 121**	**19%**
Pigments	**899**	**15%**
Oil & Mining Services	**715**	**12%**
Additives[1]	**411**	**7%**
Functional Materials	**667**	**11%**
Catalysis & Energy	**751**	**12%**

[1] Additives, the remaining part of the former Performance Chemicals, also comprises the activities of Emulsions in Morocco and the New Business Development with combined sales of around CHF 20 million.

SALES BY REGION in CHF m

Total 2012: 6 038



Europe	**2 228**	**37%**
Asia / Pacific	**1 414**	**23%**
Middle East & Africa	**537**	**9%**
Latin America	**903**	**15%**
North America	**956**	**16%**

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