

Case Study

ADDWORKS® LXR™ 568



An easy-to-use elixir for a purer white – how our AddWorks® solution helped a customer whose plastic came out too yellow

OBJECTIVES

Plastics that turn yellow during processing make transparent lunchboxes, storage containers and other rigid packaging items look old before they are even put out for sale. A customer had this problem with a peroxide-visbroken random copolymer that was used for high speed short cycle time injection molding. While coming out fine in other respects, the resin could not be made to go through the molding process without excessive discoloration, resulting in an end material that showed a too high Yellowness Index (YI). What the customer needed was the same good-quality resin without this crucial flaw, so it could be made into clear rigid packaging articles of an attractively pure whitish color.

CUSTOMER NEEDS

- A transparent whitish and clean appearing injection molded article
- Easy integration of solution into existing process
- Improved resin usable for rigid packaging items in attractive clear white color
- High speed injection molding with short cycle times

SOLUTION

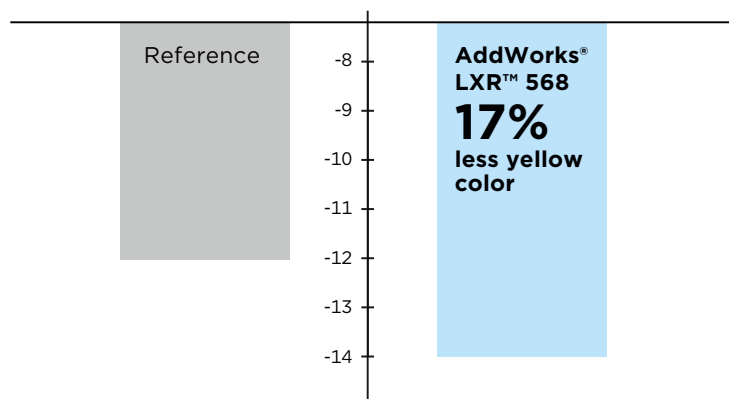
AddWorks® LXR™ 568 works like an elixir for this customer. When Clariant's high-performance stabilizer was added to the selected resin and used in the desired process, the result was a much lower discoloration during molding and an end material that showed 17% less yellowing than before. Achieving this excellent outcome could hardly have been easier for the customer. Part of the antioxidant package merely had to be replaced with AddWorks® LXR™ 568. This did not cause any other changes the customer would have to contend with. The end material showed exactly the shade of pure transparent white that had been hoped for.



— ADDWORKS® LXR™ 568 is available as easy to handle, free flowing and dust-free micro pills

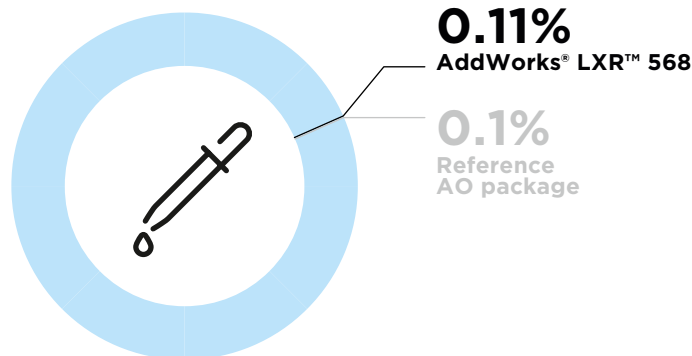
SIGNIFICANTLY IMPROVED YELLOWNESS INDEX

Resin with AddWorks® LXR™ 568 shows 17% less yellow color



ALMOST CONSTANT ADDITIVE CONCENTRATION

Replacing the antioxidant package with AddWorks® LXR™ 568



BENEFITS

17% less yellowing made the difference between having a plastic material with a host of desirable properties but unsalable because of its yellow tinge, and having the same competitive material with just the right touch of white.

As the stabilizer comes in the form of free-flowing, dust-free micro pills, the handling of AddWorks® LXR™ 568 and adding it to the process is as easy as it gets. Clariant's elixir for tricky production issues also resists hydrolysis significantly better than specialty phosphites and retards formation of non-intentionally added substances (NIAS).

SUMMARY

- **Less yellow injection molded article**
- **Substantial improvement of color stability**
- **Higher attractiveness and salability of end materials**
- **Convenient handling**
- **Easy addition to process**
- **Enhanced resistance to hydrolysis**
- **Delayed formation of NIAS**

For more information please contact
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