

CASE STUDY - THERMOPLASTICS



Rapid color changes with purge on the fly technology

50%
REDUCTION IN
DOWNTIME



WHAT WE ACHIEVED.

An ineffective method for color changes on an injection molding machine can result in wasted downtime and material. A large injection molding company recently approached Chem-Trend with contamination issues going from red to white in a polypropylene (PP). We partnered with the molder to identify a superior purging compound and process, yielding a 50% reduction in downtime.

HOW WE GOT THERE.

Prior to partnering with Chem-Trend, the injection molding company was using virgin resin to purge their machine. This substandard purging process resulted in excessive scrap and downtime. It would typically take the molder three hours to perform a color change.

The molder was a prime candidate for Ultra Purge™, our best-in-class purging compounds designed to tackle the world's most challenging changeovers. Committed to finding the best solution, an Ultra Purge™ account manager visited the molding company to develop a thorough understanding of their needs and processes. The Ultra Purge™ rep worked hand-in-hand with the customer to select the Ultra Purge™ PO grade for testing.

OUR SOLUTION.

While testing the Ultra Purge™ PO grade, the Ultra Purge™ rep recommended purging the machine “on the fly” in order to speed up the color change time. This allows the molder to quickly load the purge compound at the end of a run, then immediately resume production with minimal downtime and resin scrap. The customer had never seen a purge compound that was 100% moldable and able to purge the screw/barrel and hot runners at the same time.

Before Ultra Purge™, the molder had resorted to purging with resin because they found that too much mechanical commercial purge compound was needed to clean their machines (up to 3 barrel capacities). With Ultra Purge™, the amount used was roughly one press barrel capacity.

The test resulted in reducing the downtime from 3 hours to 1.5 hours. One week after the trial, Chem-Trend provided free training to the company in order to have all the process technicians use proper procedures and quantities.



HANDPRINT IMPACT

At Chem-Trend, we pride ourselves on our long history of sustainability efforts. However, it is our effect on our customers' processes that provides the greatest impact. It goes beyond our global Footprint; it is our even wider Handprint.

Here, we achieved the following:

- Reduction of materials due to more efficient production
- Reduction of scrap by producing more usable product and reducing the need for recycling