

CASE STUDY - THERMOPLASTICS

Ultra Purge™ purging compound optimises polypropylene (PP) colour change process from red to white.

50%
REDUCTION IN
DOWNTIME



RAPID COLOUR CHANGE WITH PURGE ON THE FLY TECHNOLOGY.

WHAT WE ACHIEVED.

An ineffective method for colour changes on an injection moulding machine can result in wasted downtime and material. A large injection moulding company recently approached Chem-Trend with contamination issues going from red to white in a polypropylene (PP). We partnered with the moulder 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 moulding company was using virgin resin to purge their machine. This substandard purging process resulted in excessive scrap and downtime. It would typically take the moulder three hours to perform a colour change.

The moulder 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 moulding company to develop a thorough understanding of their needs and processes. The Ultra Purge™ representative

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™ specialist recommended purging the machine "on the fly" in order to speed up the color change time. This allows the moulder 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% mouldable and able to purge the screw/barrel and hot runners at the same time.

Before Ultra Purge™, the moulder 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.



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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.