

CASE STUDY

We helped our customer save \$32,000 annually on one job alone. It's possible with Lusin[®] purging compounds and we can prove it!

Situation:

A multi-national North American custom injection molder of OEM parts, was already seeing a cost savings from using a well-known and established competitor's purging compound, but like many companies today, they needed to further improve efficiency while minimizing start-up scrap. With that goal in mind the account evaluated the Lusin[®] purge technology for transitioning from Xenoy* black to yellow.

** Xenoy[®], a registered trademark of the General Electric Corporation, is an alloy blend of semi-crystalline polyester (typically polybutylene terephthalate, PBT, or polyethylene terephthalate, PET) and polycarbonate (PC).¹*

For this production run, historically the account would use fifty pounds of competitive purge with a cleaning time of thirty minutes and produce approximately seventy pieces of start-up scrap before achieving streak-free production. With each part requiring 75 seconds to process, the total down time due to scrap was typically 87.5 minutes. The total purge to streak-free production time was 117.5 minutes.

Solution:

Lusin[®] Clean G 320 was selected as the product of choice, as it provides the user with a ready-to-use, low consumption product that rapidly cleans and purges engineering grade thermoplastics such as: ABS, nylon (polyamide), polycarbonate, PET, POM, PMMA, including many of the alloy blends/ modified resins such as Xenoy[®], and Surlyn[®]. The typical use level (depending on contamination level) would be three pounds for a sixty millimeter screw to thirty-three pounds for a hundred and forty millimeter screw.

Testing Background:

For the evaluation the account ran the Xenoy[®] (black) on a 550-ton Cincinnati Milicron machine with an 80 MM screw with an average barrel processing temperature of 540°F. Although the Lusin[®] technology is suitable for virtually any barrel or hot runner system, as it contains no filler or abrasives, this evaluation was done only on the barrel, as the next part (yellow) configuration required a mold change to a one-cavity mold with a part weight of 1.75 lbs.

CASE STUDY (continued)

Results:

Using the Lusin[®] Clean G 320, the total time to clean the barrel and return to streak-free production totaled 22 minutes. The amount of purge compound consumed was approximately 9.7 lbs.

To further determine the effectiveness of the Lusin[®] Clean purge, the process improvement engineer manager conducted a scrap tracking study versus the competitor's historical performance over a three-day 1700 part run. Again Lusin[®] Clean clearly out-performed the competition as our color streaking scrap during the 1700 part run was only 0.17% (3 parts) versus the competitor, which had 3.17% (54 parts) of color/streaking scrap.

Summary:

Use of a purging compound does save time and money while also improving process efficiency. If you are not using or currently evaluating the Lusin[®] Clean purge technology, you may not be achieving the optimum level of efficiency that is now achievable when using Chem-Trend's Lusin[®] brand products.

For this evaluation, the Lusin[®] Clean G 320 provided a savings of:

- An annual savings of \$32,000 in material, labor and overhead costs, based on tracking and engineers' projections.
- Time - 95.5 minutes of transition cleaning
- Eliminated 212.75 lbs of start-up and production scrap on the 1700 part (2975 lb) production run
- Improved cleaning efficiency while also reducing the amount of purge required to clean by approximately 80%



" Resin color change time can be dramatically reduced with Chem-Trend's Lusin[®] brand purging compounds after only a few cycles, resulting in high-quality, color/streak-free parts like this with minimal scrap rates."

¹ Xenoy, definition obtained from GE Plastics website.