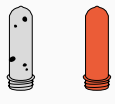
CASE STUDY - THERMOPLASTICS

Ultra Purge™ eliminates black specks in PET preform production

25%
DECREASE IN NON-USABLE SCRAP ALONGSIDE LIGHT COLOR CHANGE

45%
DECREASE IN SCRAP ALONGSIDE DIFFICULT COLOR CHANGE

100%
FEWER REJECTED END PRODUCTS DUE TO REMOVAL OF BLACK SPECK CONTAMINATION



WHAT WE ACHIEVED.

A food packaging company was experiencing a series of connected challenges in their manufacturing process. Quality problems stemming from carbonization and color changeover issues in the injection molding process were not being detected prior to shipment. Given the swift and high volume of its preform production, the manufacturer did not have an adequate solution in place to quickly identify and discard defective preforms before they made their way into bottles. The result was customer complaints, batch rejections, and, ultimately, a negative impact on the manufacturer's supplier score. Working closely with the customer, Chem-Trend's thermoplastics experts were able to remedy black specks completely, as well as drive production efficiency and peace of mind.

HOW WE GOT THERE.

A major obstacle to quality control was the manufacturer's 24/7 production schedule — with extreme limitations on downtime, preventive procedures were difficult to conduct and viewed by management as an impossibility given production output requirements. Despite this challenge, the Chem-Trend team identified the extruder and shooting pot areas of the machine as the main sources for material degradation and carbonization, which resulted in black specks, and focused on identifying an opportune time for maintenance to take place without hindering production. The team was able to highlight the resulting value addition in the process including improved quality and less scrap, which saved time and further expense.

OUR SOLUTION.

Our technical team identified a window for preventive purging during routine mold and product change that helped to resolve the common yet challenging issues of PET preform production. Through use of the Ultra Purge™ purging compound technology during color and tool changeout processes, all signs of contamination from carbon and black specks were removed in produced preforms, leading to a dramatic improvement in end product quality. Additionally, the purging compound met both FDA and European food approval standards, furthering its value addition to management.

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:

- Reduced material waste due to fewer rejects.
- Reduced energy waste due to fewer unusable products.

Materials Waste Energy

For more information about our thermoplastics capabilities, our innovations, or other stories, visit DE.CHEMTREND.COM