

Case Study

Short-run injection molder uses Dyna-Purge® to overcome purging challenges and cuts downtime by 57%.



Plant Manager Jeff Nawman is responsible for ensuring that the 14 VanDorn, Arburg, and Cincinnati Milacron injection molding machines at Paragon Molding operate at peak efficiency. **Machine downtime and purging costs have decreased by 57% using Dyna-Purge.**



A wide range of resins is used at Paragon Molding to produce clear automotive lenses, nylon chain, game calls and plastic covers. **By switching to Dyna-Purge, the company eliminated customer concerns about black specks and other contamination that can occur when using in-house resins or other recipes to purge.**

Situation:

Paragon Molding, Ltd., West Milton, Ohio, produces clear, translucent and bright-colored plastic products and components for industrial and consumer-product customers. The company operates 14 Van Dorn, Arburg and Cincinnati Milacron injection molding machines with barrel capacities ranging from 1.5 oz. to 27 oz. Multi-cavity hot runner molds are commonly used, and barrel temperatures range from 350°F to 620°F in processing a variety of resins.

Since Paragon Molding specializes in short runs, the company purges frequently for mold and color changes. The most difficult challenge is to purge when changing over from a dark material to a clear polycarbonate or any other natural, light or bright color. Various commercial purging products were tried, but proved too expensive when judged against the results.

Instead, Paragon Molding used acrylic, styrene or glass-filled ABS regrinds to purge the barrels. In more difficult cases, a homemade recipe of acrylic regrind mixed with laundry detergent and water was used. On average, it would take 70 minutes to purge and post-purge at a calculated cost of \$74.40.

Solution:

Use Dyna-Purge M, a versatile grade designed to purge a wide range of resins from the barrel and screw at 350°F to 600°F (177°C to 315°C).

Results:

- Dyna-Purge cleans thoroughly on the first pass, eliminating black specks and other contamination.
- **The average cost to purge decreased by 57% to \$32.32.**
- Total purging and post-purge time with **Dyna-Purge takes only 30 minutes, cutting downtime by 57%** while decreasing scrap and boosting productivity.

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