

Case Study

Extruder cuts downtime by 50% and improves cleaning performance purging with Dyna-Purge®.



Amhil Enterprises was using a liquid purging agent to purge 10 lines of extrusion equipment three times a month. After switching to Dyna-Purge, as demonstrated by Process Supervisor, Sukhdev Brar, the company reduced purging costs by 25%.



Producing disposable polystyrene plastic lids in a variety of colours at Amhil Enterprises requires purging during colour changes and when plastic bridges on the screw. **Dyna-Purge X, a thermoplastic compound, cleans the screw and barrel faster and more thoroughly than the liquid purging agent the company previously used.**

Situation:

Amhil Enterprises, Ltd., Mississauga, Ontario, operates 10 extrusion lines to produce polystyrene disposable plastic lids. The extrusion equipment operates at barrel temperatures from 149°C to 293°C (300°F to 560°F) with three-piece screen packs (20-mesh + 40-mesh + 20-mesh) and 4-1/2" screws.

Using a liquid purging agent, Amhil Enterprises would purge the extruders three times per month on average at a calculated cost to purge of C\$178.50. The company would purge during colour changes from dark to natural or white, and during low amps in an extruder when plastic lumps would stick in the screw (bridging).

Machine operators experienced extensive downtime with the liquid purging agent. It would take approximately one hour for mixing, activating and completing the purging process. As part of a continuous improvement program, maintenance planners investigated alternative purging means.

Solution:

Use **Dyna-Purge X**, a grade designed to purge a wide range of resins from the barrel and screw of profile and sheet extruders at 160°C to 302°C (320°F to 575°F).

Results:

- Instead of taking one hour to purge, Dyna-Purge accomplishes the task in only 30 minutes, a **50% reduction in downtime.**
- The average cost to purge decreased by 25% to **C\$133.25.**
- Machine operators report that Dyna-Purge cleans more thoroughly than the liquid purging agent previously used.

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