



SUGGESTED PURGING PROCEDURES for resin / color changes and shutdown / start-up

Process: Injection molding- hot runner with mold open

SAFETY FIRST: Before performing any procedure, it is the machine operator's responsibility to be aware of their company's safety policy, to wear the appropriate personal protective equipment, and to make sure that only authorized personnel are in the area.

STEP 1 – PROCEDURE FOR BARREL AND SCREW:

1. Maintain temperature and RPM settings for resident resin.
2. Retract injection unit from mold, leaving ample room for purge to exit nozzle.
3. Disconnect or shut-off auxiliary feeding equipment and thoroughly clean material feed system, ensuring all components including blenders, hoppers, loaders, filters, magnets, hoses, and drain ports are cleaned.
4. Empty barrel and screw of the resident resin.
5. Introduce Dyna-Purge (1 to 2 times barrel capacity) into empty hopper or side port.
Note: actual amount needed depends on machine conditions.
6. Increase the back pressure to the maximum safe level and, with the screw in the forward position, begin to purge.
Note: if unable to purge with the screw in the forward position, set machine shot size between 50% and maximum allowable setting.
7. Continue to purge until the compound flushed out of the machine is clean.
Note: if necessary, reduce back pressure and run 2 – 4 short high velocity shots to clean the check ring.
8. Thoroughly clean machine nozzle and sprue bushing to remove any contamination.
Caution: wear the appropriate personal protective equipment.

STEP 2 – PROCEDURE FOR HOT RUNNER SYSTEM:

1. Place Lava Shield™ or cardboard between mold halves to catch purge.
2. Boost hot runner temps between 50°F (10°C) and 100°F (37°C) over set point.
Caution: do not exceed recommended resin temperature range.
3. Set shot size to between 50% and 75% of available shot.
4. Move injection unit forward to make contact with mold sprue bushing and start purging through hot runner.
5. Continue to use Dyna-Purge until the purge is clean.
6. If the hot runner is valve gated you can open and close the gates individually to improve cleanliness and purging efficiency.
7. Thoroughly clean the hopper and adjust temperature settings for your next production resin.
8. Using your next production resin, flush out the remaining Dyna-Purge.
9. Reset shot size for part.
10. Check gates in mold for any blockage or drool and start production run.

▪ **see shutdown / start-up procedure on reverse side** ▪

Dyna-Purge® is a registered trademark of Shuman Plastics, Inc.

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SHUTTING DOWN:

1. Maintain temperature and RPM settings for resident resin.
2. Retract injection unit from mold, leaving ample room for purge to exit nozzle.
3. Disconnect or shut-off auxiliary feeding equipment and thoroughly clean material feed system, ensuring all components including blenders, hoppers, loaders, filters, magnets, hoses, and drain ports are cleaned.
4. Empty barrel and screw of the resident resin.
5. Introduce Dyna-Purge (1 to 2 times barrel capacity) into empty hopper or side port.
Note: actual amount needed depends on machine conditions.
6. With the screw in the forward position, purge until the compound flushed out of the machine is clean.
Note: If unable to purge with the screw in the forward position, set machine shot size between 50% and maximum allowable setting.
7. Ensure barrel is filled with Dyna-Purge to prevent the chance of oxidation. Stop screw rotation and reduce the temperature by lowering or turning off the heat zones of the machine.
Caution: as the purge solidifies, take care not to rotate screw.

STARTING UP:

1. Turn on and/or raise the temperature to 50°F (10°C) above the minimum operating temperature of Dyna-Purge.
Note: make sure to review start-up protocol on machinery for additional information.
2. When the desired temperature of Dyna-Purge has been reached, begin rotating the screw slowly to avoid too much torque. The purge may still be stiff, so do not rotate the screw at full RPM.
3. If the purge compound exiting the machine shows signs of contamination, introduce more Dyna-Purge until the compound flushed out is clean.
4. Thoroughly clean the hopper and adjust temperature settings for your next production resin.
5. Using your next production resin, flush out the remaining Dyna-Purge.
6. Thoroughly clean machine nozzle and sprue bushing to remove any contamination.
Caution: wear the appropriate personal protective equipment.
7. Move injection unit forward to make contact with mold sprue bushing.
8. Continue to run next production resin through hot runners until it is clean.
9. Check gates in mold for any blockage or drool and start production run.

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