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WHAT IS NOVAPURGE?

Novapurge is a chemical purging agent that dissolves and reduces the residue of old, oxidized and carbonized thermoplastics on cylinder walls, screws, runners and dies. It chemically depolymerizes the plastic materials to produce fragments of lower molecular weight. The other products of this chemical process are nitrogen, carbon dioxide, water vapor and a small amount of ammonia.

INSTRUCTIONS FOR USE IN EXTRUSION BLOW MOLDING EQUIPMENT

The Basic Instructions on Page 2 for using Novapurge will work effectively for:

- Extrusion blow molding machines *without*: accumulators or vented barrels.
- All thermoplastics except temperature sensitive materials such as PVC, ABS, acetal (Delrin, Celcon, etc.) TPR's, etc.
- Machines with removable hoppers or feed systems.

For specific instructions in other cases, see the following:

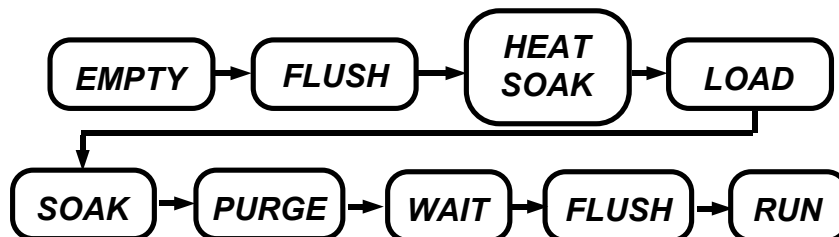
- For Temperature Sensitive Materials, see Page 3.
- For Accumulators, see Page 4.
- For Fixed Hoppers or Feed Systems see Page 4.
- For Vented Barrels, see Page 4.

**IF THERE ARE ANY QUESTIONS ABOUT USING NOVAPURGE,
CALL NOVACHEM TECHNICAL SUPPORT, TOLL FREE AT:
1-800-762-3984
WRITTEN INQUIRIES CAN BE FAXED TO US AT 1-203-367-0647**

BASIC INSTRUCTIONS

1. **EMPTY** the machine of the production resin. Raise heats in all zones after the extruder, especially low velocity areas, dead spots and the heads, about 100°F (55°C) above production temperature, but do not exceed the safe processing temperature of the production resin. Remember, Novapurge is heat activated, and best results are obtained between 500°F and 600°F. Remove the hopper or feed system and make sure all production material is cleaned out of the feed area.
2. **FLUSH** the machine by running clean natural HDPE (at least a full system volume of material – but no more than 4 system volumes) to push most of the residual production resin out of the machine. Run the machine empty again.
3. **HEAT SOAK** the machine with the system empty for 15 minutes after temperatures have lined out.
4. **LOAD** the machine with Novapurge, feeding it directly into the throat. Fill the system until Novapurge is seen emerging uniformly from the heads. Keep the heats up – Novapurge is Heat Activated!
5. **SOAK** the system with the screw stopped and in the forward position for 30 minutes. Take a shot every 5 to 10 minutes during the soak to keep the heads full of Novapurge. Keep the throat full of Novapurge!
6. **PURGE** the system empty of the Novapurge material. If the machine was heavily contaminated, and visible contamination or black specks are seen as the last of the Novapurge empties from the machine, another purge is needed, preferably at high temperature (500°F and 600°F). Raise the heats and repeat steps 4, 5 and 6.
7. **WAIT** 5 to 10 minutes after emptying Novapurge from the machine, so that the last residues of Novapurge's chemical ingredients can break down. While you're waiting, clean the throat of any remaining traces of Novapurge.
8. **FLUSH** the machine at elevated temperature with HDPE until all traces of Novapurge are gone, and replace the hopper or feed system. If this is a shutdown purge, stop now and cut the heats. Otherwise, reset temperatures for normal operation.
9. **RUN** the new production material through the system until all traces of Novapurge are removed. Then, begin normal production.

If your operation is not as described on the previous page, please refer to the appropriate sections on the following pages for additional specific instructions.



INSTRUCTIONS FOR TEMPERATURE SENSITIVE MATERIALS

For temperature sensitive materials such as PVC, acetal (Delrin, Celcon, etc.), ABS, TPR's, etc., proceed as follows:

T-1. **EMPTY** the machine of the temperature sensitive production resin. Keep your heats at operating temperature. Remove the hopper or feed system and make sure all production material is cleaned out of the feed area.

T-2. **FLUSH** the machine by running clean, natural HDPE (at least a full system volume of material – but no more than 4 system volumes) to push most of the residual production resin out of the machine. Run the machine empty again. (If you've been running PVC at low temperature, raise the heats in all zones except the throat to 380°F (195°C).)

T-3. **LOAD** the machine with Novapurge, feeding it directly into the throat. Fill the system until Novapurge extrudes uniformly from the heads; keep the throat opening filled with Novapurge. Keep the heats at operating temperature.

T-4. **SOAK** the system with the screw stopped and in the forward position for 30 minutes. Keep the throat full of Novapurge!

T-5. **PURGE** the system empty of the Novapurge material. If carbon is present, a second purge will be needed (otherwise, finish up with steps 7, 8, and 9 of the Basic Instructions on Page 2).

T-6. **RAISE** the heats in all zones after the extruder, especially low velocity areas, dead spots and the heads about 100°F (55°C). Best results will be obtained between 500°F and 600°F (between 260°C and 315°C). Perform steps 2 through 9 of the Basic Instructions on Page 2.

INSTRUCTIONS FOR SYSTEMS WITH ACCUMULATORS

A-1. Increase the shot size by 10% (if possible, move the ram back).

A-2. While **LOADING** the machine with Novapurge (Step 4) run the accumulator on automatic. The accumulator should be operated at least 2 – 4 times to ensure that the system is completely filled with Novapurge.

INSTRUCTIONS FOR FIXED HOPPERS AND FEED SYSTEMS

Feeding Novapurge directly into the throat of the machine is recommended because any traces of the material left on the hopper walls or in feed ducts will have to be thoroughly cleaned before restarting production. Otherwise production parts may be contaminated with Novapurge.

If direct access to the throat is not available, introduce Novapurge as close to it as possible. For example, remove a hopper magnet and introduce Novapurge through the magnet drawer opening.

Before resuming production, thoroughly clean any traces of Novapurge from the hopper or feed system.

INSTRUCTIONS FOR VENTED BARRELS

Because the gases released by Novapurge are important to its cleaning action, barrel vents should be capped. The following steps should be taken:

V-1. **CLEAN** vent opening manually and close the vent with a cap.

V-2. **RAISE** the decompression zone heats about 25°F (15°C).

V-3. Perform steps 1 through 9 of the Basic Instructions, Page 2. In step 3, **VARY** the speed of the screw while running Novapurge in the machine. This changes the speed of the material as it flows past the vent opening and ensures complete and even filling.

CAUTION: Novapurge releases gases during the cleaning process, and these gases can cause pressure build-up under improvised vent caps. Use caution in capping vents and in keeping clear of vent caps during the purge.

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