



Ultra Purge™ PET-E

Ready-to-Use Chemical Purging Compound

Benefits

- High efficiency
- Rapid cleaning effect
- Easy to use
- Operator and equipment safe
- Wide application range

Description

Ultra Purge™ PET-E is a ready-to-use chemical purging compound. It can be used for cleaning in injection molding, hot-runners, blow molding without accumulator and sheet extrusion applications. Ultra Purge™ PET-E can also be used for the cleaning of screw, barrel, nozzle, hot-runner and gate of injection molding machines processing thermoplastic resins. The purging concentrate consists of highly efficient cleaning additives and does not contain abrasives.

Ultra Purge™ PET-E can be used at processing temperatures from 190°C (374°F) to 320°C (608°F).

The purging compound is especially recommended for color and material change as well as for the removal of black spots, carbon residues and shut-downs.

Ultra Purge™ PET-E is suitable for following thermoplastic resins:

Resin	Suitable
Amorphous resins	+
Crystalline resins	
PA, POM	
PET	++
Polyolefins	
PS	
TPE-TPR	
High-temperature engineering resins	
PVC	
TPU	
Transparent polyamides, CA, CAB, when switching from any resin to PMMA	
When switching from any resin to PC	
When switching from any resin to PMMA	

Special Notes

- Do not load Ultra Purge™ through heated feeding line - Ultra Purge™ starts to melt at 80°C / 176°F.
- Do not use more than recommended quantities of Ultra Purge™ per cleaning.
- Do not increase temperatures when dealing with thermo-sensitive resins or additives.
- Do not mold difficult-to-eject parts-when molding Ultra Purge™ you may get a short shot.
- Do not use Ultra Purge™ outside its working temperature range.

Application

This document is a general description on how to use Ultra Purge™. Request your customized instructions by contacting your nearest sales office or local distributor.

Please read carefully the SDS before using Ultra Purge™.

We recommend the following cleaning procedures.

Typical Properties

Appearance

Transparent granules mixed with grayish-brown tablets





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Cleaning of Screw and Barrel - Injection Molding:

1. Load and run machine with clear PET until the molded preforms appear visibly cleaner/lighter (approximately 10/15 injections).
2. Adjust the back pressure in order to allow the screw to safely load and inject.
3. Move the injection unit to the back position. We recommend keeping the barrel full of resin when adding Ultra Purge™ in the machine.
4. Manually clean color mixer with a clean fabric to remove all remnants of color.
5. Add Ultra Purge™ (1 barrel capacity).
6. Do not load Ultra Purge™ in the solid color mixer or through heated elements.
7. Make injections until you see Ultra Purge™ being ejected through the nozzle.
8. Only with hard-to-clean colorants a 3 minute soak time may be required. Do not let Ultra Purge™ soak inside the machine for more than 3 minutes; it will not improve the performance.
9. Add the next production resin/color directly after Ultra Purge™ and make injections until Ultra Purge™ is displaced from the machine.
10. Make 4-5 injections with the next resin to completely displace Ultra Purge™.
11. If contamination persists, repeat steps.

Cleaning of Hot-Runner System - Mold open - Injection Molding:

1. Load and run machine with clear PET until the molded preforms appear visibly cleaner/lighter (approximately 10/15 injections).
2. Adjust the back pressure in order to allow the screw to safely load and inject.
3. We recommend keeping the barrel full of resin when adding Ultra Purge™ in the machine.
4. Manually clean color mixer with a clean fabric to remove all remnants of color.
5. Add Ultra Purge™ (1 barrel capacity).
6. Do not load Ultra Purge™ in the solid color mixer or through heated elements.
7. With mold open make injections until you see Ultra Purge™ being ejected through the hot runners.
8. Only with hard-to-clean colorants a 3 minute soak time may be required.
9. Add the next production resin/color directly after Ultra Purge™ and make injections until Ultra Purge™ is displaced from the machine.
10. Make 4-5 injections with the next resin to completely displace Ultra Purge™.

11. If contamination persists, repeat steps.

Cleaning of Hot-Runner System - Mold closed - Injection Molding:

1. Before usage mix at 50% with 50% of cold and undried PET.
2. Load and run machine with clear PET until the molded preforms appear visibly cleaner/lighter (approximately 10/15 injections).
3. Adjust the back pressure in order to allow the screw to safely load and inject.
4. We recommend keeping the barrel full of resin when adding Ultra Purge™ in the machine.
5. Manually clean color mixer with a clean fabric to remove all remnants of color.
6. Add Ultra Purge™ (1 barrel capacity) and mold parts until 100% Ultra Purge™ is molded into parts.
7. Do not load Ultra Purge™ in the solid color mixer or through heated elements.
8. Add the next production resin directly after Ultra Purge™.
9. Continue molding parts out of the Ultra Purge™.
10. Make 4-5 cycles with the next resin to completely displace Ultra Purge™. Set all the parameters to the next production settings.
11. If contamination persists repeat steps.





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Cleaning - Blow Molding - Extruder without Accumulator:

1. We recommend keeping the barrel full of resin when adding Ultra Purge™ in the machine.
2. We recommend removing the finest layer of the screen pack. Make sure that the pressure or torque force remains within the safety limits when running Ultra Purge™.
3. Add Ultra Purge™ (roughly 1.5 times the barrel capacity).
4. If present, open the purging valve located on top of the head to allow the resin to be flushed out during the purging process.
5. When Ultra Purge™ is ejected from the die, add the next production resin directly after Ultra Purge™.
6. Increase and decrease alternatively the parison thickness (if possible) to flush away contamination.
7. If possible, replace the screen pack during this phase.
8. Set all the parameters to the next production settings. If contamination persists, repeat steps.

Cleaning for Shut-Down and Start-Up – Blow Molding - Extruder without Accumulator:

SHUT-DOWN

1. We recommend removing the finest layer of the screen pack. Make sure that the pressure or torque force remains within the safety limits when running Ultra Purge™.
2. When all production resin has been used up, load 50% barrel volume capacity of Ultra Purge™.
3. If present open the purging valve located on top of the head to allow the resin to be flushed out during the purging process.
4. Extrude at slow screw rotation speed until the barrel is completely empty.
5. Turn off the machine completely (do not leave heaters in "Maintenance/Idle" mode).

START-UP

1. Turn on the machine to production settings.
2. Load Ultra Purge™, at slow screw rotation speed, until it is ejected from the die.
3. Add the next production resin directly after Ultra Purge™ and begin normal production.
4. If possible, replace the screen pack during this phase.

5. If contamination persists, follow the standard cleaning procedure. It is normal to see contamination being flushed out on startup.

Cleaning - Sheet Extrusion:

1. Before starting the purging process, decrease the temps in the head middle area (-20°C/-40°F) and increase the temps on the sides (+20°C/+40°F).
2. Manually remove all contaminations from the feeding area.
3. We recommend keeping the barrel full of resin when adding Ultra Purge™ in the machine.
4. We recommend removing the finest layer of the screen pack. Make sure that the pressure or torque force remains within the safety limits when running Ultra Purge™.
5. Add Ultra Purge™; the amount required for the purging process equals 1 full system capacity (barrel and head).
6. Load the next production resin directly after Ultra Purge™.
7. When Ultra Purge™ starts to be ejected, increase the screw rotation to the maximum safe speed to flush out all contaminations.
8. Set all the parameters to the next production settings and begin normal production.
9. If possible, replace the screen pack during this phase.
10. If contamination persists, repeat steps.





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Cleaning for Shut-Down and Start-Up - Sheet Extrusion:

SHUT-DOWN

1. We recommend keeping the barrel full of resin when adding Ultra Purge™ in the machine.
2. Manually remove all contaminations from the feeding area.
3. We recommend removing the finest layer of the screen pack. Make sure that the pressure or torque force remains within the safety limits when running Ultra Purge™.
4. Add Ultra Purge™. The amount of Ultra Purge™ required for the purging process equals 50% of the system volume capacity (barrel and head).
5. Purge out until the barrel is completely empty. **DO NOT ADD RESIN AFTER ULTRA PURGE™!**
6. Turn off the machine completely (do not leave heaters in "Maintenance/Idle" mode).

START-UP

1. Turn on the machine to production settings.
2. Add Ultra Purge™. The amount of Ultra Purge™ required for the purging process equals 50% of the system volume capacity (barrel and head). Load the next production resin directly after Ultra Purge™.
3. Reduce the screw rotation speed. When Ultra Purge™ starts to be ejected, increase the screw rotation to the maximum safe speed to flush out all contaminations.
4. Set all the parameters to production settings and begin normal production.
5. If possible, replace the screen pack during this phase.
6. If contamination persists, follow the standard cleaning procedure. It is normal to see contamination being flushed out on startup.

Dosage

Please refer to specific cleaning process.

Storage/Handling

Ultra Purge™ PET-E should be stored in a dry indoor area at room temperature. For further information on storage, handling, hazards, etc. please refer to safety data sheet.

Shelf Life

18 months

Packaging

Ultra Purge™ PET-E is available in a variety of package sizes. Please contact Chem-Trend customer service for details.

Further Information

Please request information on our complete range of materials for this industry.

While the technical information and suggestions for use contained herein are believed to be accurate and reliable, nothing stated in this bulletin is to be taken as a warranty either expressed or implied.

