



Ultra Purge™ PC

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™ PC is a ready-to-use chemical purging compound. It can be used for cleaning in injection molding, hot-runners, extrusion, and sheet extrusion applications. Ultra Purge™ PC 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™ PC can be used at processing temperatures from 220°C (428°F) to 340°C (644°F).

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

Ultra Purge™ PC is suitable for the 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	

Typical Properties

Appearance

Transparent granules mixed with white tablets

Special Notes

- Do not load Ultra Purge™ through heated feeding line - Ultra Purge™ starts to melt at 80°C / 176°F.
- Do not allow a longer soak time than suggested.
- 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 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.





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Cleaning of Screw and Barrel - Color Change - Injection Molding:

1. Move the injection unit to the back position and empty the barrel.
2. Manually remove all possible contamination sources in the hopper/mixer/filters.
3. Add Ultra Purge™ (1 barrel capacity).
4. Make injections until you see Ultra Purge™ being ejected through the nozzle.
5. For best performance we recommend a 3 minute soak time.
6. Add the next production resin/color directly after Ultra Purge™ and make injections until Ultra Purge™ is displaced from the machine.
7. Make 4-5 injections with the next resin to completely displace Ultra Purge™ and begin normal production.
8. If contamination persists, repeat steps.

NOTES - The same procedure can be applied also for START-UP. If during a color change it is necessary to change the mold, follow the procedure: "Cleaning of Screw and Barrel – Material / Mold – Injection Molding."

Cleaning of Screw and Barrel – Material/ Mold Change - Injection Molding:

1. Move the injection unit to the back position and empty the barrel.
2. Manually remove all possible contamination sources in the hopper/mixer/filter.
3. Add Ultra Purge™ (1 barrel capacity). *Do not load Ultra Purge™ at a temperature lower than 220 °C/428 °F.*
4. Make injections at production shot size until the barrel is completely empty from Ultra Purge™.
5. If you have to perform a mold change, set the temperature of the barrel to "Maintenance/ Idle" at a temp of 120 °C/248 °F and perform the mold change with barrel empty.
6. When ready to start-up, set the barrel temperature to the next production settings and add 1 barrel capacity of Ultra Purge™.
7. When Ultra Purge™ is ejected from the nozzle, we recommend a 3 minute soak time for best performance.
8. Add the next production resin directly after Ultra Purge™ and make injections until Ultra Purge™ is displaced from the machine.
9. Make 4-5 injections with the next resin to completely displace Ultra Purge™ and begin normal production.
10. If contamination persists, repeat steps.

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

1. Move the injection unit to the back position and empty the barrel.
2. Manually remove all possible contamination sources in the hopper/mixer/filters.
3. Add Ultra Purge™ (1 barrel capacity).
4. Make injections until you see Ultra Purge™ being ejected through the nozzle.
5. For best performance we recommend a 3 minute soak time.
6. Without adding any resin after Ultra Purge™, make injections until Ultra Purge™ is completely displaced from the machine.
7. Open the mold and protect the ejection side of the mold with cardboard or a metal cover.
8. With an empty barrel, add half barrel of Ultra Purge™ and with mold open make injections until you see Ultra Purge™ being ejected through the hot-runners.
9. Once Ultra Purge™ has been used up, load the next production resin and make injections until all remnants of Ultra Purge™ have been displaced from the machine.
10. Make 4-5 injections with the next resin and set all parameters to the next production settings.
11. Begin normal production.





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Cleaning of Screw and Barrel – Extruder:

1. Empty the barrel before start purging.
2. We recommend removing the finest layer of the screen pack. Make sure that the pressure or torque force remains within safety limits when running Ultra Purge™.
3. Add Ultra Purge™ (approximately 1.5 times the extruder barrel capacity).
4. Extrude at low speed until Ultra Purge™ is ejected from the machine.
5. Add the next production resin directly after Ultra Purge™.
(In case of material change with different working temperatures, empty the barrel from Ultra Purge before adding the next production resin and set the temperatures to the next production settings.)
6. Extrude the next production resin at high speed to completely displace Ultra Purge™.
7. If possible, replace the screen pack during this phase.
8. If contamination persists, repeat steps.

Cleaning – Sheet Extrusion:

1. Before starting the purging process, decrease the temperatures in the head middle area (-20°C/-36°F) and increase the temperatures on the sides (+20°C/+36°F).
2. Manually remove all contaminations from the feeding area.
3. Empty the barrel before start purging.
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™ (approximately 1.5 times the extruder barrel capacity).
6. Extrude at low speed until Ultra Purge™ is ejected from the machine.
7. Add the next production resin directly after Ultra Purge™. *(In case of material change with different working temperature, set the temperatures to the next production resin.)*
8. Extrude the next production resin at higher speed to flush out all remnants of Ultra Purge™.
9. If possible, replace the screen pack during this phase.
10. If contamination persists, repeat steps.

Dosage

Please refer to specific cleaning process.

Storage/Handling

Ultra Purge™ PC 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™ PC 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.

