



Don't just purge...*ULTRA PURGE!*™

ULTRA PURGE PET-E

Purging Compound

Produced By

MOULDS PLUS

INTERNATIONAL



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ULTRA PURGE PET-E

Ready-to-Use Purging Compound Food Contact Certified

ULTRA PURGE PET-E is a specially designed cleaning compound that comes premixed in a ready-to-use pellet form. It cleans black specks and deposits from - screws, barrels, nozzle, hot runners and heads of extruders. Superior results are obtained when doing periodic cleaning or color changes with all thermoplastics resins such as:

PET

With working temperature from **374° F** to **608° F (190° C to 320° C)**

How Ultra Purge works:

- **ULTRA PURGE** is nonabrasive and works through a chemical reaction. With the presence of an innovative chemical component, color, incrustation, black specks and also rust are softened, removed and ejected from the press.
- The new formula is added with expanding agents, which allow the compound to be more efficient even in difficult to clean situation.
- **ULTRA PURGE** cleans at the processing temperature of the previous production material.
- **ULTRA PURGE** is recommended for injection molding machines, extruders and hot runners.

Benefits:

- EU food contact certified
- Only a small quantity is required
- Non-Toxic
- No soak-time required
- Easy-to-use and efficient in cleaning process
- No more wasting of materials or loss of production time
- Odorless...does not produce gasses of any kind
- Does not contain solvents, therefore it will not ruin any equipment
- If used frequently, **ULTRA PURGE** will preserve equipment from steel oxidation by forming a protective, anti-adherent layer which makes the next cleaning process quicker and easier
- All components are qualified as **GRAS** (Generally Recognized As Safe) by **FDA**

Suggestions:

- A second run may be required to fully purge an older or overused machine.
- It is highly recommended that the Ultra Purge container be properly sealed after each use. The forming of small clots of sticky substance may occur due to moisture. Please note that this will not alter the efficiency of the product.

Directions for Use:

For use with Injection Molding Machines to produce preforms:

- Load and run machine with clear PET until the molded preforms appear visibly cleaner/lighter (10/15 shots)
- Adjust the back-pressure from 8 to 10 bars
- Manually clean the liquid/solid color injection part to remove the remnants of color
- **Without running the barrel empty** load Ultra Purge in the feeding hopper.
***Do not load Ultra Purge in the solid color mixer**
- Run screw at 50% of the screw rotation speed and do not change the extruder temperature.
*** Do not let Ultra Purge soak inside the machine for more than 3 minutes**
- When the previously loaded quantity of Ultra Purge is used up, load machine with PET. It is important **not to run the barrel empty** to improve Ultra Purge's performance
- Begin normal production

** It is possible to clean the hot runners with Ultra Purge PET-E but we recommend getting in contact with our technical service or your local distributor for more information.

Recommended Quantity to clean the extruder and shooting pot with Husky IMM:

Extruder Ø (mm)	85	100	120	140
Lbs of Ultra Purge)*	8.8	11	15.4	22

(*) based on dark coloration, need to be optimized according to colorant & concentration used

Use with Injection Molding Machines - Bi-Layer Injection Unit:

- Flush the injection unit and the hot runners with natural PET
- Detach the injection unit from the mold
- Load Ultra Purge in the feeding hopper and start performing injection until the purging compound will be ejected from the nozzle.
- Reduce the temperature of all cavities except for the one that needs to be clean. This will allow the purging compound to go through only that cavity increasing the efficiency.
- Attach the injection unit to the mold and start to flush the cavity with the mold open.
- A two minute soak time is recommended to maximize the results.
- In case of heavy deposits increase and decrease the temperature of the flushed cavity may help to easily remove the contaminations.
- Load machine with PET to allow remnants of Ultra Purge to be removed. Keep flushing the cavity for 10-15 shots.
- Adjust all cavities temperature to normal working condition and keep flushing for 5-10 shots
- Begin normal production.

Use with Hot Runner Systems (Mold Open):

- Stop the dosing unit and perform five injection shots with the injection unit detached from the mold.
- After five shots, stop the machine, open the color mixer and clean with a clean fabric rug
- Load Ultra Purge PET-E and perform injections until Ultra Purge is ejected from the nozzle. (The injection has to be in the back position detached from the mold.)
- Move the injection unit in the forward position, attaching it to the mold and perform two injections shots through the hot runners. Let Ultra Purge soak for 2-3 minutes inside the hot runners for each shot and repeat this procedure during every shot. It is recommended to place a cardboard foil under the mold to collect the purging material.
- While the last shot of Ultra Purge soaks in the mold, detach the injection unit from the mold and removed the rest of the purging compound within the barrel using clear PET.
- After Ultra Purge is completely removed from the barrel, attach the injection unit to the mold and perform three shots with clear PET to remove Ultra Purge from the hot runner.
- After the three shots with clear PET though the hot runners, proceed to clean the mold cavity removing the purged PET.
- Start the production in semi-automatic mode for 3-4 cycles and then switch to automatic mode

Use with Hot Runner Systems (Mold Close):

- First clean screw and barrel using the Ultra Purge PET-E grade until the ejected Ultra Purge appears visibly clean. Eject Ultra Purge PET on the side.
- Load clear PET and flush the barrel and shooting pot until to purge Pet appears visibly clean
- Mix 50% Ultra Purge PET-E with 50% PET and load the machine (we recommend using a total of 4 times the shot size)
- Start to mold the Ultra Purge PET-E/PET mixture at a moderate screw rotation speed
- When the previously loaded quantity of Ultra Purge is used up, load machine with PET.
- Begin normal production

Use with Injection Molding Machines:

- Run the machine with a neutral grade of the plastic resin you are going to purge
- Adjust the screw back-pressure to allow the loading of Ultra Purge (generally 5 to 8 bars)
***For larger machines (over 200Ton), we recommend reducing the shot size by 10-15% of the maximum shot size**
- **Without running the barrel empty**, load Ultra Purge at a moderate screw rotation speed and begin injection cycle (we recommend loading the quantity of one time the content of the barrel for machines that are in good working condition)
- In hard to clean situations, a 3-minute soak time is necessary.
***Do not soak longer than 3 minutes**
- When the previously loaded quantity of Ultra Purge is used up, load machine with the next production material. It important **not to run the barrel empty** to improve Ultra Purge's performance
- Continue running machine for a total of 4-5 full shots to eliminate remnants of Ultra Purge within the machine.
- Begin normal production

Use with Extrusion Machines:

- Run the extruder with the neutral grade of the plastic resin you are going to purge to remove the largest portion of the color (one time the content of the extruder)
- If a screen pack is present, please remove it from the machine
- **Without running the extruder empty**, load Ultra Purge and run machine at the same temperature as previous material (we recommend loading the quantity of 2 times the content of the barrel for machines that are in good working condition)
- Adjust screw rotation to low to allow the compound to expand inside the machine. The ejected purging compound should have a foamy appearance. If it does not, further reduce the screw rotation speed.
***For larger extruders, allow Ultra Purge to soak for 3 minutes once it begins to eject out of the machine**
- When the previously loaded quantity of Ultra Purge is used up, load machine with the next production material. It important **not to run the barrel empty** to improve Ultra Purge's performance
- Begin normal production

Safety: Purging should be performed with purge guards closed and proper face shield, gloves and long sleeve clothing.

MATERIAL SAFETY DATA SHEET

(ISSUE NO. 4 DATED OCTOBER 19th, 2005)

1. Identification elements of the compound and company

1.1 Compound identification elements

denomination **Ultra Purge PET-E**

1.2 Company identification data:

Italy

Moulds Plus International s.r.l.
Via D. Carbone, 104 - 15050 Villalvernia (AL)
Country: Italy
Phone: +39-0131- 836115
Fax: +39-0131-836882

USA

Moulds Plus International USA, Inc.
2809 La Salle Ave
Costa Mesa, CA 92626
Tel (714) 360 2202
Fax(714) 708 2659

e-mail : info@moulds.org
Website: www.moulds.org

1.3 Urgent information

Contact the above numbers

2. Composition/ Agents Information

2.1 Chemical features: the detergent mixture ultra purge contains inorganic and inert salts and other components considered as confidential information. all components are GRAS qualified (generally recognized as safe) by FDA.

2.2 Product description: blend of additives in styrene resin

2.3 Dangerous components: none

3. Dangers / Warning

3.1 Risk description: molten plastic or purging compound can cause severe burns.

3.2 Special information of particular risks for man and environment: none

4. Medical First Aid Information

General Information

4.1 By inhalation: no particular precaution is required

4.2 By accidental contact with eyes: in case of contact with a melted polymer, rinse out with running water and call a physician immediately

4.3 By accidental contact with skin: in case of contact with a melted polymer, rinse with running water and call a physician immediately

4.4 If swallowed: no harmful effect has been found after swallow of the resin

5. Fire Precautions

5.1. Suitable extinguishing equipment: atomised water jet, extinguish dust, sand, foam, carbon dioxide

5.2 Extinguish material unsuitable for safety reasons: according to our present knowledge there is none

5.3 Particular dangers coming from the substance, from the same compound, from the combustion products or from the exhaled gases: as for every polymeric product, a wrong combustion might provoke carbon monoxide fumes.

5.4 Safety equipment for fire watchers: respirator in case of unventilated area

6. Measures by accidental out rush

6.1 Personal precautions - no particular precaution is required

6.2 Environment protection - comply with local regulations

6.3 Cleaning/gathering procedures: use of mechanical means

7. Handling, storage and usage

7.1 handling: handle as a thermoplastic resin. Before introduce Ultra Purge in the machine read always the MSDS of the product with Ultra Purge will be in contact with

7.2 Storage: store in a cool and dry area, normally ventilated. Make sure that the bucket is perfectly closed after taking of quantity necessary for more or less immediate use. The formation of small clots of sticky substance inside the bucket does not injury the efficiency of the product, it just shows the moisture absorption index.

8. Exposure Control/Individual Protection

8.1 General precautions:

When cleaning the press or the extruder, follow the same precautions as if working with melted polymers

8.2 Respiratory system protection

When cleaning the press or the extruder follow the same precautions as if working with melted polymers

8.3 Hand protections

When cleaning the press or the extruder follow the same precautions as if working with melted polymers

8.4 Eye protection

When cleaning the press or the extruder follow the same precautions as if working with melted polymers

9. Chemical and physical properties

Physical state solid granules

Odour - odourless

Ph:	N/A
Boiling point from:	N/A
Melting point from:	70 °C
In flammability point from:	>300 °c
Ignition temperature:	>450 °c
Explosive properties:	none
Combustion properties:	none
Comparative density at 25° c:	0.70 gr/cc
Solubility:	negligible water solubility
Thermal decomposition:	starts at 85°c

10. Stability and Reactivity

10.0 General information

No dangerous reaction is known if storage and handling are performed in compliance with the instructions

10.2 Hazardous conditions: avoid temperatures higher than 80°c. **except** during the use of the product, do not exceed the temperature of 320°c (608°f) in case a product for higher temperatures is required, please contact to the supplier

10.3 Hazardous substances: none

10.4 Dangerous decomposition products

If storage and handling are performed as per instructions: none

11. Toxicological information

11.1 General practices

On the ground of our present knowledge it is physiologically tolerable. According to our present knowledge it is neither alterable, nor cancerogenous nor teratogenous. Its components are "GRAS" by FDA.

11.2 Acute toxicity

Ld/lc50 values remarkable for classification

Ld50/ Lc50 (oral rat): >>10,000mg/kg

12. Ecological information

12.1 persistence and biodegradability

The polymeric element is not biodegradable (PE, PS, PMMA.....or as shown on the label)
The remaining part is completely biodegradable.

12.2 environment effects

A biologic accumulation is unlikely.
There is no danger or restriction for rail transport

12.3 Eco-toxic effect

It is determined that there are no harmful eco-toxic effects to the fish
How to handle situation when product gets into water plant:
It is determined not to have any harmful effects in the water plant

12.4 More Ecologic Indications

Handle with care and correct usage so as to not cause any negative effects to the environment

13 Considerations for Proper Disposal

13.1 Disposal of the product or its residuals: it can be disposed by burning, landfill or according to city regulations

13.2 Container disposal:

it can be disposed by burning, landfill or according to city regulations

14 Transport Information

14.1 There is no danger or restriction for any mode of transport

15 Regulations Information

15.1 Labelling in compliance with European (CEE) regulations: exempt

16. Additional Information

All data shown on this sheet are based on the information available at our company on the last issue date. They do not mean any assurance for every specific feature of the product and represent no contract obligation.

The user must make sure of the conformity and completeness of information with regard to the specific use of the product.

The information furnished in this MSDS is not intended to create any liability of any kind on the part of Moulds Plus International. In no event Moulds Plus International will be responsible for any death, injury or damage of any nature resulting from the use of reliance upon, or measure of the MSDS or material to which it refers. The data on this sheet relates only to the specific material designed herein.

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