



Don't just purge...*ULTRA PURGE!*

ULTRA PURGE PET-E

Purging Compound

Ready-To-Use Formula

Produced by:

MOULDS PLUS

INTERNATIONAL

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:

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. Color, incrustation, black specks and rust are softened, removed and ejected from the press through an innovative chemical process.
- Expanding agents are added to the new formula, which allows the compound to be more efficient - even in difficult to clean situations.
- **ULTRA PURGE** cleans at the same processing temperature of the previous production material.
- **ULTRA PURGE** is recommended for injection molding machines, extruders and hot runners.

WHEN TO USE ULTRA PURGE:

- **Use Ultra Purge during ALL color changes to minimize down time and to drastically reduce the presence of black specks during the production.**

In the most instances, black specks come from degraded colorant. The quantity of Ultra Purge recommended in the **Table 1** is referring to hard to clean situations such as white, opaque colorant and very dark colorant. The quantity of Ultra Purge may be reduced when cleaning lighter colorants.

- **To prevent black speck problems rising from degraded colorant, additives or scavengers:**

We recommend using Ultra Purge as a preventive maintenance before the problem occurs once every two weeks by using the Ultra Purge quantity shown in **Table 2**. Based on the entity of the problem, the frequency of the cleaning process may be changed.

- **To eliminate the “slip screw” problem.**

Liquid colorants tend to build up in the screw with the consequent loss of plasticizing efficiency. Using Ultra Purge in the quantity shown in **Table 1** will help to completely solve the problem.

Recommended Usage Quantity of Ultra Purge PET-E

Table 1 (Color Changes)

Extruder Ø (mm)	85	100	120	140
Kg. of Ultra Purge*	4	5	7	10
Lbs. of Ultra Purge*	10	12	15	22

(* need to be optimized according to colorant & concentration usage)

Table 2 (Black Specks)

Extruder Ø (mm)	85	100	120	140
Kg. of Ultra Purge*	2	3	4	5
Lbs. of Ultra Purge*	5	6	8	11

(* need to be optimized according to entity of the problem)

Table 3 (Mold Preform)

Extruder Ø (mm)	85	100	120	140
Kg. of Ultra Purge*/ Kg of PET**	2 / 2	2.5 / 2.5	3.5 / 3.5	5 / 5
Lbs. of Ultra Purge*/ Lbs of PET**	5 / 5	6 / 6	7.5 / 7.5	11 / 11

(* need to be optimized according to entity of the problem)

(**) use cold PET only

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 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 **GRAS** (Generally Recognized As Safe) by **FDA** as substances added indirectly to human food

SUGGESTION:

- 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 effectiveness of the product.

Directions for Use:

For use with Husky Injection Molding Machines for the production of PET preforms:

Extruder and Shooting Pot

- Load and run machine with clear PET until the molded preforms appear visibly cleaner/lighter (approximately 10/15 shots)
- Adjust the back-pressure from 8 to 10 bars
- Manually clean color mixer with a clean fabric rag to remove all remnants of color
- **Without running the barrel empty**, load Ultra Purge in the feeding hopper using the quantity indicated in **Table 1 or 2** depending on the usage need.
***Do not load Ultra Purge in the solid color mixer**
- Run screw at 50% of the screw rotation speed without changing the extruder temperature and start to make injection
- With hard-to-clean colorant a 3 minute soak time might be required once the barrel will be entirely fill-up with Ultra Purge
*** Do not let Ultra Purge soak inside the machine for more than 3 minutes; it will not improve the process.**
- 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

Hot Runners (Mold Open):

- Stop the color 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 it with a clean fabric rag.
- Load the quantity of Ultra Purge PET-E shown in **Table 1** 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 three 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 third shot with clear PET through the hot runners, proceed to manually 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

Hot Runners (Mold Close):

- Stop the color dosing unit and perform five injections with clear PET
- After the five shots, stop the machine, open the color mixer and clean it with a clean fabric rag
- Load Ultra Purge PET-E according to **Table 3** and start molding preforms
- When the previously loaded quantity of Ultra Purge is used up, load machine with PET.
- When preforms appear visibly clean begin normal production

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 is 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 flow only in 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.

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

MATERIAL SAFETY DATA SHEET

(ISSUE APRIL 16th, 2010)

1. Identification elements of the compound and company

1.1 Compound identification elements

denomination **Ultra Purge PET-E**

1.2 Company identification data:

Italy

M.P.I. s.r.l.
Via D. Carbone, 104 - 15050 Villalvernia

(AL)

Country: Italy
Phone: +39-0131- 836136
Fax: +39-0131-836882

USA

Moulds Plus International USA, Inc.
1521 E McFadden Unit G
Santa Ana, CA 92705
Tel 714 708 2663
Fax 714 708 2659

Mexico

Moulds Plus Mexico
Ahorro Postal 103
Del. Benito Juarez
CP 03420 Mexico D.F.
Tel (55) 8590-8834
Fax(55) 9180-1341

e-mail : info@ultrapurge.com
Website: www.ultrapurge.com

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 that are confidential. All components are GRAS qualified (generally recognized as safe) by the 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 humans 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 seek medical attention immediately

4.3 By accidental contact with skin: in case of contact with a melted polymer, rinse with running water seek medical attention immediately

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 Dangers that may arise from the substance, compound, combustion or emission of gases: Carbon monoxide fumes may be emitted when combustion occurs with polymeric substances

5.4 Safety equipment for fire fighters: use respirator in unventilated area

6. Measures for accidental spills

6.1 Personal precautions - no particular precaution is required

6.2 Environment protection - comply with local regulations

6.3 Cleaning procedures: use of mechanical equipment for cleaning

7. Handling, storage and usage

7.1 handling: handle as a thermoplastic resin. Before introducing Ultra Purge in the machine always read the related MSDS of the product in which Ultra Purge will be used

7.2 Storage: store in a cool, dry and well ventilated area

Ensure that the Ultra Purge bucket is sealed after removing the necessary quantity to be used. A sticky substance may form inside the bucket but will not alter the effectiveness of the product.

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

10.1 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 higher temperatures are required, please contact 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, the product is neither alterable, carcinogenic or tetanal. Its components are "GRAS" by the FDA.

11.2 Acute toxicity

Ld/lc50 values remarkable for classification
Ld50/ Lc50 (oral rat): >>10,000mg/kg

12. Ecological information

12.1 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
none.

12.3 Toxic effects

It is determined that there are no negative effects to fish
How to handle situation when product gets into water treatment plants
It is determined not to have any harmful effects on water treatment plants

12.4 More Ecologic Considerations

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

15.2 TSCA

All components/ingredients are listed under the TSCA (Toxic Substances Control Act) inventory

15.3 It is ROHS compliant

15.5 REACH

All components/ingredients are, where necessary, pre-registered substances according to the REACH regulation.

Also the product doesn't contain any substance belonging to the candidate list SVHC (Substances of Very High Concern)

16. Hazardous Material Identification System (HMIS)

Health Hazard	0
Minimal	
Reactivity Hazard	0
Minimal	
Flammability Hazard	0
Minimal	
Unusual Fire and Explosion Hazard	
None	

17. Additional Information

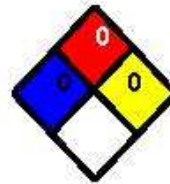
Material Safety Data Sheet Disclaimer

Material Safety Data Sheet should be kept and maintained because they provide necessary, helpful, and useful information on the properties of the chemical or chemical product. You should familiarize yourself with those properties, such as flammability, corrosiveness and toxicity as well as storage and handling information, before you work with the chemical. Also, it is vital to your personal safety that you are able to refer to that MSDS immediately in the event of an emergency such as a spill, fire or physical contact with the chemical.

Moulds Plus International believes that the data contained herein are factual and the opinions

expressed are those of qualified experts regarding the results of the tests conducted, the data is not to be taken as warranty or representation for which Moulds Plus International assumes legal responsibility. They are offered solely for your consideration, investigation and verification. Any use of this data and information must be determined by the user to be in accordance with applicable Federal, State and local laws regulations.

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NFPA RATING

HEALTH	0	
FLAMMABILITY	0	
REACTIVITY	0	
PROTECTIVE EQUIP.		

HMIS RATING