



***Purging Compounds***

**Ultra PLAST PO-C**

**Ready to use Purging Compound**

***ULTRA SYSTEM***

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# ULTRA PLAST PO-C

## Ready to use Purging Compound

Ultra Plast is a specially developed cleaning compound that is delivered in a premixed and ready-to-use pellet form. It is specific for the cleaning of endless screws, barrels, nozzles, hotrunners and extrusion heads to remove burnt material (colour) rests, deposits, incrustations and black specks during colour and/or material change of all thermoplastics such as: **PVC, EVA, POM, HDPE, LDPE, PP, Polyolefin resin etc.**

**At a processing temperature ranging from 140° C to 300° C (284° F to 572° F) it removes, at the temperature of the previously processed material any incrustation and deposit.**

The compound is **not abrasive** and works with a chemical reaction. Due to particular chemical components, coloured and burnt polymers, incrustations, black specks and also rust are softened, removed and ejected from the press. Consequently **NO MECHANICAL ACTION** is made on the machine parts!

If used frequently, it will preserve all the equipment from steel oxidation and make the following cleaning process quicker and easier.

It cleans at the processing temperature of the previous production material and no soak time is required. It is recommended for hot runners.

Ultra Plast is not toxic and is odourless. It will not damage your equipment because it does not contain solvents: all components are qualified as GRAS (Generally Recognized As Safe) by FDA .

It may happen that running Ultra Plast in older machines, where the equipment is overused, the cleaning process may not remove all old rests of material ran months ago. In this case, a second run may be required to fully purge the machine

It is highly recommended that the container be properly sealed after each use. The forming of small clots of sticky substance may occur. Please note that this will not alter the efficiency of the product.

The recommended storage time for Ultra Plast is 12-18 months.

### **Use with Injection Moulding Machines:**

- Increase barrel temperature by 10-30°C; this operation is not strictly necessary but will help to obtain a better cleaning result. In case of PVC or POM do not increase the temperatures as those materials do not support high processing temperatures.
- Load screw, barrel with a neutral grade of plastic resin (possibly suitable material) and run the machine as long as the material comes out with a lighter colour (i.e. from red to pink and from dark blue to light blue)
- Run barrel empty and place screw in full forward position. Adjust the back-pressure of the machine to allow the loading of Ultra Plast (generally 5 to 8 bars)
- Load Ultra Plast (fill the barrel completely) and start injection cycle
- Plastification duration:
  - approx. 40 seconds for machines up to 200 tons
  - approx. one minute for bigger machines (IMPORTANT! Do not leave the purging compound longer than 2 minutes in the still standing machine!)
- Continue with injection process with short shots until the ejected Ultra Plast appears visibly clean
- Load machine with the next production material and run machine (with normal processing values) to eliminate all removed rests of Ultra Plast within the machine.
- Begin normal production

### **Use with Extrusion Machines:**

- Run the machine with the neutral grade of the plastic resin you are going to process
- If a nozzle filter is present remove it from the machine
- Load Ultra Plast and run machine at a 20-30° C increased temperature; in case of PVC or POM do not increase the temperatures as those materials do not support high processing temperatures.
- Adjust screw rotation to low speed 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.
- If the purging compound should come out from the venting holes of the barrel, increase the screw speed.
- For larger extruders, allow Ultra Plast to stop for 3 minutes once it begins to eject out of the machine
- Continue to extrude Ultra Plast until it appears visibly clean
- Load neutral or production material and run machine to eliminate all removed rests of Ultra Plast within the machine
- Begin normal production

### **Use with Blow Moulding Machines:**

- Increase temperature of the head by 10-30° C and decrease temperature of the first zone of the extruder by 20-30°C. In case of PVC or POM do not increase the temperatures as those materials do not support high processing temperatures.
- Load screw, barrel and head with neutral resin (possibly with suitable material), plastify and purge as long as the material comes out lighter (i.e. from dark blue to light blue, from red to pink etc.)

Load Ultra Plast mixture by filling completely barrel and screw

- Tighten as much as possible the nozzles so that the purging compound can create pressure inside the head; when it is not possible to adjust Parison thickness, increase screw speed in order to create pressure
- If the screw should slipper, decrease barrel temperature by 30°C.
- Purge completely Ultra Plast .
- Purge with neutral resin in order to eliminate all removed material rests and bring back barrel and head parameters to those suitable for the material to be processed. Remember to open again the nozzles.
- Begin the new production.

### **Use with Injection Moulding Machines and Hot Runners:**

- Run the machine with a neutral grade of the plastic resin you are going to purge
- Increase hotrunners' temperature as much as possible (up to 300°C - 572°F) according to the processed material (attention with PVC and POM which do not support high temperatures). As this operation takes some time it should be done immediately
- Load Ultra Plast PO-C in the machine and start to mould (the necessary quantity should be one or twice the net capacity of the barrel, depending on material and masterbatch and the hotrunners' type) until the moulded parts appear visibly clean.
- When the moulded parts are almost clean, stop the machine cycle for not longer than max. three minutes and then continue to process PO-HS. If the moulded pieces are clean you may start the new production; if the pieces should come out with colour stripes (that means not yet perfectly clean) charge some more PO-C (approx. from 1 to 2 kg according to machine dimension) and mould it.
- When the moulded part is visibly clean load the production material (PE, PP, PVC, POM, PS) or neutral material and begin normal production

# MATERIAL SAFETY DATA SHEET

ISSUE 1/10 of 22/07/2010

## 1. IDENTIFICATION ELEMENTS OF THE COMPOUND AND COMPANY

1.1 COMPOUND IDENTIFICATION ELEMENTS DENOMINATION:

### ULTRA PLAST PO-C

1.2 COMPANY IDENTIFICATION DATA:

COMPANY NAME: ULTRA PLAST ASIA CO.,LTD.

ADDRESS: 55 Soi Onnut 17 Yak 3 Suanluang Suanluang Bangkok 10250

PHONE: (662) 337 3942 FAX: (662) 337 3942

E-MAIL : info@ultraplastasia.com WEBSITE :www.ultraasia.com

1.3 URGENT INFORMATION: Mr. Erich Ziegler – (66)-08-45546464 , Mr. Navin – (668) 18277359

## 2. COMPOSITION/AGENTS INFORMATION

2.1 CHEMICAL FEATURES: THE DETERGENT MIXTURE ULTRA PLAST CONTAINS INORGANIC AND INERT SALTS AND OTHER COMPONENTS CONSIDERED AS CONFIDENTIAL INFORMATION. ALL COMPONENTS ARE GRAS QUALIFIED (GENERALLY RECOGNIZED AS SURE) BY FDA.

2.2 PRODUCT DESCRIPTION: BLEND OF ADDITIVES IN OLEFINIC RESIN

2.3 DANGEROUS COMPONENTS: NONE

## 3. DANGERS / WARNING

3.1 RISK DESCRIPTION: MOLTEN PLASTIC CAN CAUSE SEVERE BURNS.

3.2 SPECIAL INFORMATION OF PARTICULAR RISKS FOR MAN AND ENVIRONMENT: NONE

## 4. MEDICAL FIRST AID INFORMATION

4.1 GENERAL INFORMATION

4.2 BY INHALATION: NO PARTICULAR PRECAUTION IS REQUIRED

## 5. FIRE PRECAUTIONS

5.1. SUITABLE EXTINGUISHING EQUIPMENT: ATOMIZED WATER JET, EXTINGUISH DUST, SAND, FOAM, CARBON DIOXIDE

5.2 EXSTINGUISH 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 OUTFRUSH

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 BAG DOES NOT INJURY THE EFFICIENTCY 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 CONCENTRATION LIMITS IN THE WORKING AND BIOLOGIC AREAS

8.3 RESPIRATORY SYSTEM PROTECTION

WHEN CLEANING THE PRESS OR THE EXTRUDER FOLLOW THE SAME PRECAUTIONS AS IF WORKING WITH MELTED POLYMERS

8.4 HAND PROTECTIONS

WHEN CLEANING THE PRESS OR THE EXTRUDER FOLLOW THE SAME PRECAUTIONS AS IF WORKING WITH MELTED POLYMERS

8.5 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: -

MELTING POINT FROM: 70 °C (158°F)

INFLAMMABILITY POINT FROM: >300 °C (572°F)

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IGNITION TEMPERATURE: >450 °C (842°F)  
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 (185°F)

#### 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 300°C (572°F) IN CASE A PRODUCT FOR HIGHER TEMPERATURES IS REQUIRED, PLEASE APPLY 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.

##### 12.3 ECOTOXIC EFFECT

IT IS DETERMINED THAT THERE ARE NO HARMFUL ECOTOXIC 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: CAN BE DISPOSED BY BURNING, LANDFILL OR ACCORDING TO CITY REGULATIONS

##### 13.2 CONTAINER DISPOSAL

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 FOREVER 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 ULTRA SYSTEM. IN NO EVENT ULTRA SYSTEM SRL WILL BE RESPONSIBLE FOR ANY DEATH, INJURY OR DAMEGE OF ANY NATURE RESULTING FROM THE USE OF RELIANCE UPON, OR MISURE 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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