Material Safety Data Sheet

According to GHS
(Globally Harmonized System)
and Regulation (EC) No. 1907/2006

Version	7
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1. Identification of substance:

- **Product details**
- **Trade name:** ***Moplen*** **EP300L**
- **Application of the substance / the preparation:** Synthetic resin for polymer processing.
- **Manufacturer/Supplier:** PolyMirae Company Ltd.
- **Informing department:** HSE, ADTS/I

HSE
3, 220-10 Yeosusandan 2-ro, Yeosu-si, Jeollanam-do,
Korea 59611
Phone: +82-61-688-6645/ Fax.: +82-61-688-6636

ADTS/I
15F 25, Gukjegeumyungro 2-gil, Youngdeungpo-gu, Seoul,
Korea (Youido-dong, EUSU holdings Bldg.) 07327
Phone: 82-2-2167-8983/ Fax.: +82-2-2167-8929

2. Hazards identification

- **Classification**
  Not a dangerous substance or mixture according to Globally Harmonized System (GHS).
- **Labelling**
  Not a dangerous substance or mixture according to Globally Harmonized System (GHS).
- **Classification system**
  This product is, according to 1999/45/EC and 67/548/EEC, according to 1907/2006/EC, and following amendments , not classified as hazardous.
- **Information pertaining to particular dangers for man and environment**
  The molten product adheres to the skin and causes burns.
  Spilled material may present a slipping hazard.
  Possible production of electrostatic charging when used.
  If small particles are generated during further processing, may form combustible dust concentrations in air.

3. Composition/information on ingredients:

- **Chemical characterization:**

Component	Composition (Wt.%)	CAS No.
Propylene Ethylene Copolymer	>98	9010-79-1
Additives (trade secret)	<2	-

4. First aid measures

- **General information:**
  The measures listed below apply to critical situations (Fire, incorrect process conditions).
  Take proper precautions to ensure your own health and safety before attempting rescue and providing first aid.
  At room temperature the product is neither an irritant nor gives off hazardous vapours.
- **If inhaled:**
  In case of excessive inhalation of fumes move the person to fresh air. If signs/symptoms continue, get medical attention. Keep person warm, if necessary give Cardio-Pulmonary Resuscitation (CPR).
- **In case of skin contact:**
  After contact with the molten product, immediately flush with large amounts of water to cool the affected tissue and polymer. Do not pull solidified product away from the skin.
  Obtain immediate emergency medical attention if burn is deep or extensive.
- **In case of eye contact:**
  Flush eyes thoroughly with water for several minutes and seek medical attention if discomfort persists.
  In case of eye contact with molten polymer, flush eye(s) with cool running water for at least 15 minutes.
  Beyond flushing, DO NOT attempt to remove the material adherent to the eye(s).
  Seek medical attention.

- If swallowed:
Get medical advice if necessary.
No specific measures have to be taken if the product is swallowed.

5. Fire-fighting measures

- Suitable extinguishing agents:
SMALL FIRES: Use dry chemical, CO2, or water spray.
Large FIRES: Use water spray hose nozzles from a safe location.
- Unsuitable extinguishing agents: None
- Special hazards caused by the substance or mixture
- Specific hazards during fire-fighting:
In case of fire hazardous decomposition products may be produced such as:
Carbon monoxide, carbon dioxide and unburned hydrocarbons (smoke)
The formation of hydrocarbons and aldehydes are possible in the initial stages of a fire
(especially in between 400°C and 700°C).
- Advice for fire-fighters
- Protective equipment:
Wear approved positive pressure self-contained breathing apparatus and firefighter protective clothing.
- Further information:
Combustible particulates solid, will decompose under fire conditions.
Calorific value: 8000 - 11000 kcal/kg
Fight fire from may melt, decompose polymer, and generate flammable vapors.
Move containers from fire area if it can be done without risk.
Evacuate immediately in the event of opening of storage container pressure relief devices or discoloration of container.
Always stay away from tanks engulfed in fire.
Do not attempt to get on top of storage containers involved in fire.
Cool storage containers with large volumes of water even after fire is out.

6. Accidental release measures

- Personal precautions, protective equipment and emergency procedure
- Personal precautions:
Equip responders with proper protection
Creates dangerous slipping hazard on any hard smooth surface.
Equip emergency responders with proper personal protective equipment (PPE)
Avoid dispersal of dust in the air (i.e., cleaning dust surfaces with compressed air.)
Polymer particles create slipping hazard on hard smooth surfaces.
May Contain trace amounts of light hydrocarbons, compounds of oxidation, aldehydes and acid.
- Measures for environmental protection:
Do not flush into surface water or sanitary sewer system.
See points 12 and 13.
- Measures for cleaning/collecting:
See point 13.
Small spills: Put into a labeled container and provide safe disposal.
Large spills: Act as during a limited release.
Recycle product or dispose properly.

7. Handling and storage

- Precaution of safe handling:
No special requirements necessary, if handled at room temperature.
Avoid spilling the product, as this might cause falls.
When bringing the material to processing temperatures gases might develop, forming:
Propylene, hydrocarbon substances with low molecular weight and their oxidation products,
solvent residues, traces of formaldehyde and acrylaldehyde and traces of acids (Formic acid, acetic acid)
Provide appropriate ventilation for such processing conditions.
Experimental tests under different application conditions showed maximum limits of formaldehyde,
acrylaldehyde, formic acid, and acetic acid being significantly below TLV- values.
Take precautionary measures against explosion risks, as all types of polymers may develop dust
during transporting or grinding of granules.
- Conditions for safe storage, including any incompatibilities.
- Requirements for storage areas and containers:
Store in a dry location.

Use good housekeeping practices during storage, transferring and handling.
Store away from excessive heat and away from strong oxidizing agents.
Keep container closed to prevent contamination.
Take measures to prevent the build-up of electrostatic charge.
Store either in the closed original containers in well ventilated area or in silos with vents.

8. Exposure controls and protection

- Engineering measures:
Follow the recommendations in international standard NFTA 654 (as amended and adopted)
Ensure that dust-handling systems (such as exhaust ducts, dust collectors, vessels, and processing equipment) are designed in a manner to prevent the escape of dust into the work area
(i.e., there is no leakage from the equipment)

- Components with limit values that require monitoring at the workplace: Not required.
- Additional exposure limit values for possible processing dangers:

107-02-8 acrylaldehyde

WEL Short-term value: 0.70 mg/m³, 0.3 ppm
Long-term value: 0.23 mg/m³, 0.1 ppm

50-00-0 formaldehyde

WEL Short-term value: 2.5 mg/m³, 2 ppm
Long-term value: 2.5 mg/m³, 2 ppm

64-18-6 formic acid

WEL Long-term value: 9.6 mg/m³, 5 ppm

- Additional information: see point(s) 7, 9.
- Personal protective equipment
- General protective and hygienic measures:
Do not eat or drink while working.
Eliminate ignition sources.
Provide system for collecting the vapors which are created during the working process.
- Respiratory protection:
Use process enclosures, local exhaust ventilation, or other engineering controls to keep airborne levels below recommended exposure limits.
Use appropriate respiratory protection where atmosphere exceeds recommended limits.
If appropriate ventilation is not available use face mask when handling the molten product.
- Protection of hands:
Wear gloves that provide thermal protection where there is a potential for contact with heated material.
- Material of gloves:
The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer.
- Penetration time of glove material:
The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.
- Eye protection:
Dust service goggles should be worn to prevent mechanical injury or other irritation to eyes due to airborne particles which may result from handling this product.
- Skin and Body protection:
Wear suitable protective clothing.
- Hygiene measures:
Selection of appropriate personal protective equipment should be based on an evaluation of the performance characteristics of the protective equipment relative to the task(s) to be performed, conditions present, duration of use, and the hazards and/or potential hazards that may be encountered during use.
Use good personal hygiene practices.
Wash hands before eating, drinking, smoking, or using toilet facilities.
Take off contaminated clothing and wash before reuse.

9. Physical and chemical properties:

- General Information
Form: Pellets
Color: Natural
Odor: Slight or No Data available
- Change in condition

Melting point/Melting range: 50℃~170℃
Boiling point/Boiling range: Not determined
- **Flash point:** Not applicable (see attachment to guideline 92/69/EEC, A.9)
- **Ignition temperature:** >400°C
- **Decomposition temperature:** >300°C
- **Danger of explosion:** Product is not explosive., See point(s) 7.
- **Density at 20 °C:** 0.89-0.91 g/cm3
- **Solubility in / Miscibility with Water:** Insoluble
- **Additional information:** Soluble in boiling, aromatic chlorinated solvents.

10. Stability and reactivity

- **Thermal decomposition / conditions to be avoided:**
  The product is stable at normal handling- and storage conditions.
- **Materials to be avoided:** Strong oxidation agent
- **Dangerous reactions** No dangerous reactions known
- **Dangerous products of decomposition:**
  No hazardous decomposition products known at room temperature.
  Carbon monoxide, olefinic and paraffinic compounds, trace amounts of organic acids, ketones, aldehydes and alcohols may be formed under thermal decomposition.

11. Toxicological information

- **Acute toxicity:**
  Acute oral toxicity: Not classified.
  Acute dermal toxicity: Not classified.
  Acute inhalation toxicity: Not classified.
- **Primary irritant effect:**
- **Skin corrosion/irritation:** No irritant effect.
- **Eye damage/irritation:** No irritant effect.
- **Sensitization:** No sensitizing effect known.
- **Additional toxicological information:**
  When used and handled according to specifications, the product does not have any harmful effects according to our experience and the information provided to us.

12. Ecological information

- **Information about elimination (persistence and degradability)**
- **Other information:** The product is not biodegradable
- **Behavior in environmental systems**
- **Mobility and bioaccumulation potential:**
  Floats on water.
  There is no bioaccumulation
- **General notes:** The product is not toxic, small particles can have physical effects on water and soil organisms.

13. Disposal considerations

- **Waste treatment methods**
- **Product:**
  All recovered material should be packaged, labeled, transported and disposed of or reclaimed in conformance with applicable laws and regulations and in conformance with good engineering practices. Reclaim where possible. Recycle of possible.
- **Recommendation:**
  The material can be re-used or recycled according to the regulations of Guideline EG 94/62.
  Disposal through controlled incineration or authorized waste dump.
- **European waste catalogue** 070213
- **Uncleaned packaging**
- **Recommendation:** Disposal must be done according to official regulations.

14. Transport information

- **Transport/Additional information:**
  According to national and international guidelines, which regulate the road-, rail -, air- and sea transport,

this product is classified as not dangerous.
- **IATA:** Not dangerous

15. Regulatory information

- **Designation according to EC guidelines:**
  The material is not subject to classification according to EC lists and other sources of literature known to us.
  Observe the normal safety regulations when handling chemicals.

16. Other information

- **The first date of preparation:** 2000.09.01
- **Revised number and date:** 7th, 2017.02.02
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- **Department issuing data specification sheet:** ADTS/I
- **Contact: Mr. CH Lim (ch.lim@polymirae.com)**
- **Bibliography**
- Globally Harmonized System of classification and labeling of chemicals (GHS), First revised edition, United Nations

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