

Material Safety Data Sheet

1. IDENTIFICATION

- A. Product Name : YUHWA POLYPRO Grade : 5014L MAT-3
- B. Recommended use of the chemical and restrictions on use
A polyolefin plastic – For industrial conversion as a raw material for manufacture of articles or goods
- C. Information of manufacture, supplier
 - 1) Company : Korea Petrochemical Ind. Co., Ltd.
 - 2) Address : 178, Bukok-Dong, Nam-Ku, Ulsan, Korea
 - 3) Emergency Telephone No : (052) 278-8242~8246

2. HAZARD IDENTIFICATION

- A. Classification : None
- B. Label element, including precautionary statements
 - 1) Symbols : Data not available
 - 2) Signal word(s) : Data not available
 - 3) Hazard statement(s) : Data not available
 - 4) Precautionary statement(s)
 - Prevention : Data not available
 - Response : Data not available
 - Storage : Data not available
 - Disposal : Data not available
- C. Other hazards which do not result in classification
NFPA Code : Health =1, Flammability = 1, Reactivity = 0

3. COMPOSITION/INFORMATION ON INGREDIENTS

- A. Chemical identity : Ethylene-Propylene Copolymer / Polyethylene
- B. Common name, synonym : 1-Propene, Polymer with Ethylene, Propylene, Polymer with Ethylene / Ethene Polymer, Ethylene Polymer, Polyethene
- C. CAS No : Propylene Copolymer : 9010-79-1 / Polyethylene : 9002-88-4
- D. Content : ≥99% (Additive : ≤1%)

4. FIRST AID MEASURES

- A. Eye contact
Flush eyes thoroughly with water at full. If effects occur, consult a physician.
- B. Skin contact
If molten material comes in contact with the skin, do not apply ice but cool under ice water.
Seek medical attention immediately.
- C. Inhalation
Move person to fresh air. If effects occur, consult a physician.
- D. Ingestion
If swallowed, seek medical attention.
- E. Most important symptoms/effect, acute and delayed
None established
- F. Indication of immediate medical attention and special treatment needed, if necessary
Treatment should be directed at the control of symptoms and the clinical condition of the patient.

5. FIRE-FIGHTING MEASURES

- A. Suitable extinguishing media
Dry chemical fire extinguishers, Carbon dioxide fire extinguishers, Foam, Water fog or fine spray.
- B. Specific hazards arising from the chemical
During a fire, smoke contain the original material in addition to combustion products of varying
Composition which may be toxic or irritation
- C. Special protective equipment and precautions for firefighters
Keep people away.
Cool surroundings with water to localize fire zone.
Hand held dry chemical or CO₂ extinguishers may be used for small fires.

6. ACCIDENTAL RELEASE MEASURES

- A. Personal precautions, protective equipment and emergency procedures
Isolate the hazard area. Use appropriate safety equipment.
- B. Environmental precautions
Prevent from entering into soil, ditch, sewers, waterways or groundwater.
- C. Methods and materials for containment and cleaning up
Contain spilled material if possible. Sweep up. Collect in suitable containers.

7. HANDLING AND STORAGE

- A. Precautions for safe handling : Not applicable
- B. Conditions for safe storage
Store in accordance with good manufacturing practices.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

- A. Exposure limits in the air of the workplace, biological limit values : Not applicable
- B. Appropriate engineering controls
 - Good general ventilation should be adopted.
 - Local exhaust ventilation may be necessary for some operations.
- C. Individual protection measures
 - 1) Respiratory protection
 - Use an approved air ; purifying respirator when vapors are generated at increased temperatures or when dust or mist is present.
 - The following should be effective types of air ; purifying respirators
 - ⊙ Particulate filter
 - ⊙ Organic vapor cartridge with a particulate pre-filter
 - 2) Eye protection
 - Use safety glasses. Wear chemical goggles.
 - 3) Hand protection
 - Use gloves with insulation for thermal protection.
 - 4) Body protection
 - No precautions other than clean body-covering clothing should be needed.

9. PHYSICAL AND CHEMICAL PROPERTIES

- A. Appearance (Physical state, color etc) : Pellet with white color or transparent colorless.
- B. Odor : odorless
- C. Odor threshold : Data not available
- D. pH : Not applicable
- E. Melting point / Freezing point :
 - Melting point : 140°C~145°C / 130°C~135°C - Freezing point : 90°C~110°C / 90°C~110°C
- F. Initial boiling point and boiling range : Not applicable
- G. Flash point : Data not available
- H. Evaporation rate : Not applicable
- I. Flammability (Solid, Gas) : Data not available
- j. Upper/lower flammability or explosive limits : Data not available
- K. Vapor pressure : Not applicable
- L. Solubility : Data not available
- M. Vapor density : Not applicable
- N. Specific gravity : 0.90~0.92
- O. Partition coefficient n-octanol/water : Not applicable
- P. Auto ignition temperature : 375°C~400°C
- Q. Decomposition temperature : Data not available
- R. Viscosity : Data not available
- S. Molecular weight : > 40,000

10. STABILITY AND REACTIVITY

- A. Chemical stability : Stable at room temperature and atmospheric pressure
- B. Possibility of hazardous reactivity : Data not available
- C. Conditions to avoid : Exposure to elevated temperature, Flame, Ignition source.
- D. Materials to avoid : Strong oxidizing agents
- E. Hazardous decomposition products
Processing may release fumes and other decomposition products

11. TOXICOLOGICAL INFORMATION

- A. Information on the likely routes of exposures
 - 1) Inhalation exposure : Dust inhalation may be cause cough
 - 2) Ingestion exposure : Data not available
 - 3) Skin and eye exposure : Data not available
- B. Delayed and immediate effects and also chronic effects from short and long term exposure
 - 1) Acute toxicity
 - LD50 : >110 gm/kg, Intraperitoneal(rat) - LD50 : >99 gm/kg, Intravenous(rat)
 - 2) Skin corrosion/irritation : Not applicable
 - 3) Serious eye damage/ irritation : Not applicable
 - 4) Respiratory sensitization : Data not available
 - 5) Skin sensitization : Data not available
 - 6) Carcinogenicity : Not listed in IARC
 - 7) Germ cell mutagenicity : Not listed in IARC
 - 8) Reproductive toxicity : Not applicable
 - 9) Specific target organ systemic toxicity-single exposure : Not applicable
 - 10) Specific target organ systemic toxicity-repeated exposure : Not applicable
 - 11) Aspiration hazard : Not applicable
- C. Numerical measure of toxicity(such as acute toxicity estimate) : Data not available

12. ECOLOGICAL INFORMATION

- A. Aquatic, terrestrial organisms toxicity : Data not available
- B. Persistence and degradability : Data not available
- C. Bioaccumulative potential : Data not available
- D. Mobility in soil : Data not available
- E. Other adverse effects : Data not available

13. DISPOSAL CONSIDERATIONS

- A. Disposal methods
All disposal practices must be in compliance with all Federal, state/provincial and local laws and regulations
- B. Disposal considerations(Specify disposal container and methods) : Data not available

14. TRANSPORT INFORMATION

- A. UN number : Data not available
- B. UN proper shipping name : Data not available
- C. Transport hazard class : Data not available
- D. Packing group, if applicable : Data not available
- E. Environmental hazards : Data not available
- F. Special precautions for user : Data not available

15. REGULATORY INFORMATION

- A. Safety, health and environmental regulations specific for the product in question
 - 1) USA
 - OAHHS (29CFR1910.119) : Not regulated
 - CERCLA 103 (40CFR302.4) : Not regulated
 - SARA 302 (40CFR355.30) : Not regulated
 - SARA 304 (40CFR355.40) : Not regulated
 - SARA 313 (40CFR372.65) : Not regulated
 - California Proposition 65 : Not regulated
 - 2) EU
 - EU Classification : Not determined

16. OTHER INFORMATION

- A. References and sources for data
 - 1) KPIC R&D Center
 - 2) Korea Occupational Safety and Health Agency
 - 3) Globally Harmonized System of classification and labeling of chemicals(GHS), First revised edition, United Nations.
 - 4) EINECS (European Inventory of Existing Commercial chemical Substances)
 - 5) IARC (International Agency for Research on Cancer)
- B. Originated data
April 1st 2002
- C. Revision number and date
 - 1) Revision number : 3
 - 2) Final revision date : June 10th 2010
- D. Others
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