

# Material Safety Data Sheet

## 1. IDENTIFICATION

- A. Product Name : YUHWA HIDEN Grade : P600
- 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 : 260-158, Cheoyong-ro, Nam-gu, 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 : High Density Polyethylene
- B. Common name, synonym : Ethene Polymer, Ethylene Polymer, Polyethene
- C. CAS No : 9002-88-4
- D. Content :  $\geq 99\%$  (Additive :  $\leq 1\%$ )

#### **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 CO<sub>2</sub> 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 : 130°C~140°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 : 0.940~0.970
- O. Partition coefficient n-octanol/water : Not applicable
- P. Auto ignition temperature : 350°C
- Q. Decomposition temperature : Data not available
- R. Viscosity : Data not available
- S. Molecular weight : > 5,000

## 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
    - Ingestion : LD50 ; > 3200 mg/kg, (rat)
    - Skin absorption : Data not available
    - Inhalation : LC50 ; 12000mg/m<sup>3</sup>, (mouse)
  - 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
    - OSHA (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

June 10th 2010

### C. Revision number and date

- 1) Revision number : 3
- 2) Final revision date : June 10th 2010

### D. Others

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