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| LOTTE chemical Corp. Lotte Tower B/D (9~11F), 359-67, Shindaebang-dong, Dongjak-gu, Seoul, Korea Tel) 02-829-4114 Fax) 02-843-1010 Homepage) www.hpc.co.kr | Material Safety Data Sheet | File No | MSDS-PE-UF414 |
| | | Issue Data | 2009.02.01 |
| | Polyethylene (PE) | Revision Data | |
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SECTION 1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

- 1) Product Name: Polyethylene, GRADE: UF414
- 2) Company Identification
 - ① Prepared by: LOTTE chemical Corp. Daesan Plant
 - ② Address: 634 Dokgot-Ri, Daesan-Eup, Seosan-city, Chungnam, Korea
 - ③ Telephone & Fax: Tel) 82-61-689-5830, Fax) 82-61-689-5993
 - ④ Revision Date: 2009.02.01

SECTION 2. COMPOSITION / INFORMATION ON INGREDIENTS

| Component | Polyethylene | Additives |
|-----------------|--------------|-----------|
| CAS No | 9002-88-4 | - |
| Composition (%) | Min 99 | Max 1 |

SECTION 3. HAZARDS IDENTIFICATION

- 1) Appearance: White
- 2) Eye Contact: Product fines can cause mechanical irritation.
- 3) Skin Contact: Product is unlikely to cause irritation.
- 4) Inhalation: Product fines may cause mechanical irritation.
- 5) Ingestion: Product is practically non-toxic.
- 6) Signs and Symptoms: Irritation as noted above.

SECTION 4. FIRST AID MEASURES

- 1) Eye Contact: Flush eyes with water if irritation occurs.
- 2) Skin Contact: Flush skin with plenty of soap and water for at least 15 minutes, while removing contaminated clothing and shoes.
- 3) Ingestion: Do not induce vomiting. Allow the victim to rinse his mouth then to drink 2-4 cupfuls of water and seek medical advice.
- 4) Inhalation: Remove from exposure to fresh air immediately.
- 5) Notes to physician: Treat symptomatically and supportively.

SECTION 5. FIRE-FIGHTING MEASURES

- 1) Flash Point and Method: Not Applicable

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- 2) Extinguishing media: Use water fog, foam, dry chemical or CO2
- 3) Autoignition temperature: Not Applicable
- 4) Special fire fighting procedures and precautions: Material will not burn unless preheated. Do not enter confined fire space without full bunker gear(helmet with face shield, bunker coats, gloves and rubber boots). Cool fire exposed containers with water.
- 5) Unusual fire and explosion hazards: Treat as a solid that can burn. Molded parts generally burn slowly with a low smoke density and flaming drips. Under certain conditions can burn with a high smoke density.

SECTION 6. ACCIDENTAL RELEASE MEASURES

- 1) General information: Use proper personal protective equipment
- 2) Spill/leaks: Clean up spills immediately. Sweep up, then place into a suitable container for disposal.

SECTION 7. HANDLING AND STORAGE

- 1) Handling: Wash thoroughly after handling. Remove contaminated clothing and wash before reuse. Avoid contact with eyes, skin, and clothing. Avoid ingestion and inhalation.
- 2) Storage: Store in a cool, dry place. Keep container closed when not in use.

SECTION 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

- 1) Engineering controls: Use adequate general or local exhaust ventilation to keep airborne concentrations below the permissible exposure limits. Use process enclosure, local exhaust ventilation, or other engineering controls to control airborne levels.
- 2) Personal protective equipment
 - ① Eye: Wear safety glasses and chemical goggles if splashing is possible.
 - ② Skin: Wear appropriate protective gloves and clothing to prevent skin exposure.
 - ③ Clothing: Wear appropriate protective clothing to minimize contact with skin.
 - ④ Respirators: Use approved supplier air respiratory protection.

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SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

- 1) Appearance: White
- 2) Odor: Essentially odorless pellet.
- 3) pH: Not applicable
- 4) Solubility: (In Water) Insoluble
 (Other solvent) Soluble in Tetrahydronaphthalene,
 Tetrachloroethane etc.
- 5) Viscosity: Not applicable
- 6) Melt point: 100 ~ 130 °C
- 7) Boiling point: Not applicable
- 8) Decomposition temperature: Not applicable
- 9) Vapor pressure: Not applicable
- 10) Vapor density (air=1): Not applicable
- 11) Evaporation rate: Not applicable
- 12) Specific gravity (H2O=1): 0.910 ~ 0.945
- 13) Molecular weight: >10,000

SECTION 10. STABILITY AND REACTIVITY

- 1) Chemical stability: Stable under normal temperature and pressure
- 2) Conditions to avoid: Incompatible materials, strong oxidants
- 3) Incompatibilities with other materials: Strong oxidizing agents
- 4) Hazardous decomposition product: Carbon monoxide, irritating and toxic fumes
 and gases, carbon dioxide

SECTION 11. TOXICOLOGICAL INFORMATION

- 1) LD50: 3200 mg/kg Mouse-in throat
- 2) Inhalation: Product fines may cause mechanical irritation.
- 3) Skin contact: Product is unlikely to cause irritation.
- 4) Eye contact: Product fines can cause mechanical irritation.
- 5) Ingestion: Product is practically non-toxic.

SECTION 12. ECOLOGICAL INFORMATION

- 1) Spill or leak procedures: Shovel and sweep up or use industrial vacuum cleaner.

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Avoid generation dust clouds. Put into containers for reclaiming or disposal.

2) Ecotoxicity: Not applicable

SECTION 13. DISPOSAL CONSIDERATIONS

1) Waste disposal method: Place contaminated material in disposable containers and dispose of in a manner consistent with applicable regulations. Contact local environmental or health authorities for approved disposal of this material.

2) Environmental hazards: Not applicable

SECTION 14. TRANSPORTATION REQUIREMENTS

Not applicable

SECTION 15. REGULATORY INFORMATION

1) Korea: Not applicable

2) US Federal: The components of this product are listed on the SARA and TSCA inventory of chemical substances.

SECTION 16. ADDITIONAL INFORMATION

The information contained herein is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Therefore, vendee assumes the risk in his use of the material.