1. IDENTIFICATION OF CHEMICAL/SUBSTANCE AND COMPANY/UNDERTAKING

PRODUCT INFORMATION

Product Description: Linear Low Density Polyethylene
Use of Substance/mixture: For making Polymers
Chemical Family: Natural pelleted thermoplastic polyethylene compound
Manufacturer: EQUATE Petrochemical Company (K.S.C.C.)
P.O. Box 9717, Ahmadi 61008, Kuwait

EMERGENCY PHONE NUMBER: 965-2326-0246 (24 hours a day)
Email: RD_Tech_Ser_Grp@equate.com

2. HAZARDS IDENTIFICATION

2.1 Classification of the Substance or Mixture
Classification according to Regulation (EC) No 1272/2008
The substance is not classified according to CLP Regulation
Classification according to Directive 67/548/EEC or 1999/45/EC
Not Applicable
Information regarding particular hazards for human and environment - Not applicable

2.2 Label elements
Labeling according to Regulation (EC) No 1272/2008 - void

2.3 Other Hazards
Result of PBT and vPvB assessment - Not applicable

3. COMPOSITION / INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>INGREDIENTS</th>
<th>CAS#</th>
<th>%W/W</th>
<th>HAZARDS</th>
</tr>
</thead>
<tbody>
<tr>
<td>1-Butene, polymer with ethene</td>
<td>25087-34-7</td>
<td>99-100</td>
<td>not hazardous</td>
</tr>
<tr>
<td>Additives</td>
<td>various</td>
<td>0.1-1.0</td>
<td>not hazardous</td>
</tr>
<tr>
<td>1-Hexene, polymer with ethene</td>
<td>25213-02-9</td>
<td>99-100</td>
<td>not hazardous</td>
</tr>
<tr>
<td>Additives</td>
<td>various</td>
<td>0.1-1.0</td>
<td>not hazardous</td>
</tr>
</tbody>
</table>

4. FIRST AID MEASURES

SKIN CONTACT
For thermal skin burns, remove clothing, any jewelry, and gross debris from the burned area. Leave blisters intact. Wash the area thoroughly with room temperature tap.
water. Do not use ice. Cover the wounded area with gauze dressing moistened with
cool water; keep the dressing moist. Seek medical attention.

**INHALATION**
Remove to fresh air.

**INJESTION**
Small amounts may cause choking and gastrointestinal problems. If large amount
swallowed, seek immediate medical assistance.

**EYE CONTACT**
In case of dust contact with eyes, flush thoroughly with water for several minutes.
Remove contact lenses, if worn. Seek medical advice if irritation persists.
For thermal eye burns, immediately flush eyes with water and continue washing for
several minutes. DO NOT remove contact lenses, if worn. Obtain medical attention
without delay, preferably from an ophthalmologist.

### 5. FIRE-FIGHTING MEASURES

- **Flash Point:** Not applicable
- **Autoignition temperature:** 349˚C
- **Flammable Limits:** Not applicable
- **Combustion Products:** Carbon dioxide, carbon monoxide, irritating gases and soot.

**General Hazards**
Non-combustible, will easily burn under fire conditions. Accumulated fines poses a
risk of explosion and hazardous static charges

**EXTINGUISHING MEDIA**
Apply all-purpose-type foam by manufacturer's recommended techniques for large fires.
Use carbon dioxide or dry chemical media for small fires.

**SPECIAL FIRE FIGHTING PROCEDURES**
Do not direct a solid stream of water or foam into burning molten material; this may
cause spattering and spread the fire.

**SPECIAL PROTECTIVE EQUIPMENT FOR FIREFIGHTERS**
Firefighters should wear full bunker gear (helmet with face shield, bunker coat,
gloves and rubber boots) and a positive pressure NIOSH approved self-contained
breathing apparatus.

### 6. ACCIDENTAL RELEASE MEASURES
7. HANDLING AND STORAGE

HANDLING

This product is for Industrial Use only

General Precaution for Resin Bags

Do not handle bag or liner in presence of flammable vapors.
Do not pull bags from bottom or middle section of stacked bags.
Care must be exercised to keep the bags from contamination.
Follow safe lifting methods while handling loose bags.

General Precautions for Sea Bulk Container

Ensure proper grounding before unloading the sea bulk container.

General Precautions for Polyethylene Resin

Avoid breathing dust and process fumes
Local exhaust ventilation is recommended for control of airborne dust, fumes and vapors, particularly in confined areas.

Other Precautions

Physical handling and processing of this product by pneumatic conveying and grinding, etc., can generate fines and dust particles that can, under certain conditions, pose an explosion hazard. We recommend that the system used be:
(1) equipped with filters of adequate size; (2) operated and maintained in a manner to ensure that no leaks develop; and (3) adequately grounded. We further recommend good housekeeping be practiced throughout the facility.
EQUATE PETROCHEMICAL CO. (K.S.C.C.)

MATERIAL SAFETY DATA SHEET

STORAGE

Store away from flames and oxidizing agents, in a dust-free, cool, dry place with adequate ventilation and absence of direct sunlight. Keep storage temperature preferably below 40 °C but not exceeding 48 °C.

Pallets should be stacked two high maximum. The upper layer pallets should overlap the middle of the two adjacent bottom pallets in an interlocking position.

For detailed instruction consult EQUATE Petrochemical Company’s “Polyethylene Handling and Storage Guide” booklet.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

ENGINEERING CONTROLS

Adequate engineering controls are required to prevent exposure to potentially toxic irritating fumes. Proper ventilation to be employed to remove and keep air borne levels below recommended exposure limits.

PERSONAL PROTECTION

Respiratory Protection

None required; however, use of adequate ventilation is good industrial practice. Adequate engineering controls are required to prevent exposure to potentially toxic irritating fumes.

Hand Protection / Protective Gloves

None required; however, use of gloves is good industrial practice.

Eye Protection

None required; however use of eye protection is a good industrial practice. Use dust goggles if high dust concentration is generated.

Skin Protection

None required; however, use of protective clothing is good industrial practice.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance

Opaque translucent solid pellets
Odor: Essentially odorless

Melting Point/Range: 118 – 138°C

Specific Gravity: 0.940 – 0.970

Autoflammability: 260 – 410°C

Solubility:
- Water: Insoluble
- Other solvents: Soluble to various extents

10. STABILITY AND REACTIVITY

Stability: Stable at room temperature

Conditions to Avoid: Prolonged temperature above 250°C

Materials to Avoid: Strong Oxidizing Agents

Incompatible Materials: None

Polymerization: Will Not Occur

Hazardous Decomposition Products:
At processing temperatures, some degree of thermal degradation will occur. Although highly dependent on temperature and environmental conditions, a variety of decomposition products may be present ranging from simple hydrocarbons (methane and propane) to toxic/irritating gases such as carbon monoxide, carbon dioxide, organic acids, ketones, aldehydes and other organic vapors.

11. TOXICOLOGICAL INFORMATION

The product is non-toxic by composition. However, care should be taken to avoid dust or any fumes that may be generated during its processing. Pre-existing eye and respiratory disorders may be aggravated by exposure to product fines.

Reproductive toxicity: No effects known

Mutagenecity: No effects known

Carcinogenicity: No effects known

Sensibilisation: No effects known

12. ECOLOGICAL INFORMATION
13. DISPOSAL CONSIDERATIONS

WASTE DISPOSAL METHOD(S)

Reclaim the material where possible.
When disposed of, this product is not considered a hazardous waste. Dispose of in accordance with appropriate government and local regulations.

14. TRANSPORT INFORMATION

The material is non-hazardous. It is not regulated for transport by sea (IMO/IMDG), Air (ICAO/IATA) and Road/Rail.

15. REGULATORY INFORMATION

This product is not considered as a “Hazardous Chemical”.

United States: TSCA Inventory: This material is listed or exempted
European Community: EINECS: This material is listed or exempted
AUSTRALIA: AICS: This material is listed or exempted
PEOPLE’S REPUBLIC OF CHINA: IECSC: This material is listed or exempted
PHILIPPINES (PICCS): This material is listed or exempted

This is not comprehensive list of applicable regulations. Contact your EQUATE representative for additional information.

16. OTHER INFORMATION

FOOD CONTACT STATUS

Specific information on Food Contact Status could be supplied upon request.
The product is intended for industrial use only. This MSDS and other product literature should be carefully reviewed before using the product. If necessary consult reference works or experts in fire prevention, ventilation and toxicology for proper understanding and utilization of the data in the MSDS. Enforce good housekeeping in your plant.

Specific toxicology tests have not been conducted on this product. Our toxicity evaluation is based on information from similar products, the ingredients, technical literature and/or professional experience.

**NFPA Rating**

Health : 0 Flammability : 1 Reactivity : 0

**List of Abbreviations**

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Description</th>
</tr>
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<tbody>
<tr>
<td>ASTM</td>
<td>American Society for Testing and Materials</td>
</tr>
<tr>
<td>C.A.S</td>
<td>Chemical Abstract Service</td>
</tr>
<tr>
<td>FDA</td>
<td>The U.S. Food and Drug Administration</td>
</tr>
<tr>
<td>IATA</td>
<td>International Air Travel Association</td>
</tr>
<tr>
<td>ICAO</td>
<td>International Civil Aviation Organization</td>
</tr>
<tr>
<td>IMO</td>
<td>International Maritime Organization</td>
</tr>
<tr>
<td>IMDG</td>
<td>International Maritime Dangerous Goods</td>
</tr>
<tr>
<td>MSDS</td>
<td>Material Safety Data Sheet</td>
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</tbody>
</table>

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