



## RELENE LLDPE : ETHYLENE 1-OCTENE COPOLYMER

# MATERIAL SAFETY DATA SHEET

### 1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

**Product Name:** RELENE LLDPE

**Company Identification:** Reliance Industries Limited,  
Polymer Business,  
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**Use of Substance / Preparation:** Industrial use only. Raw material for plastics processing industry.

### 2. HAZARDS IDENTIFICATION

Not classified as dangerous for supply/use. The preparation does not meet the criteria for classification in accordance with Directive 1999/45/EC and Directive 1272/2008/EC.

### 3. COMPOSITION/INFORMATION ON INGREDIENTS

#### 3.1 Chemical composition:

Linear Low Density Polyethylene CAS No.: 26221-73-8; 99 % (Minimum).

| HAZARDOUS INGREDIENT(S) | %W/W | CAS No. | EC No. | EC Classification |
|-------------------------|------|---------|--------|-------------------|
| None.                   |      |         |        |                   |

### 4. FIRST AID MEASURES



- 4.1 Inhalation** Remove patient from exposure. Keep patient at rest and give oxygen if breathing difficult. If symptoms develop, obtain medical attention.
- 4.2 Skin Contact** After contact with skin, wash with water. In case of burns from hot material immediately cool affected skin as long as possible with cold water.

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- 4.3 Eye Contact** Obtain medical attention.  
Remove particles by irrigating with eye wash solution or clean water, holding the eyelids apart. If symptoms persist, obtain medical attention.
- 4.4 Ingestion** Unlikely to be hazardous if swallowed. Provided the patient is conscious, wash out mouth with water and give 200-300 ml (half a pint) of water to drink. Do not induce vomiting. If symptoms develop, obtain medical attention.
- 4.5 Further Medical Treatment** Unlikely to be required but if necessary treat symptomatically.

### 5. FIRE-FIGHTING MEASURES

- 5.1 Extinguishing Media** As appropriate for surrounding fire. Extinguish preferably with foam, carbon dioxide or dry chemical.
- 5.2 Unsuitable Extinguishing Media** Do not use water jet or waterspray.
- 5.3 Fire Fighting Protective Equipment** A self contained breathing apparatus and suitable protective clothing should be worn in fire conditions.
- 5.4 Hazardous Decomposition Product(s)** Combustion or thermal decomposition will evolve toxic and irritant vapours.
- 5.5 Other** Can melt and burn in a fire. Molten material tends to flow or drip and will propagate fire.

### 6. ACCIDENTAL RELEASE MEASURES

- 6.1 Personal Precautions** Caution - spillages may be slippery. Ensure suitable personal protection (including respiratory protection) during removal of spillages. Dust clouds are sensitive to ignition by electrostatic discharge.
- 6.2 Environmental Exposure Controls** Avoid release to the environment. Do not allow to enter drains, sewers or watercourses.
- 6.3 Methods for cleaning up** Sweep up and shovel into waste drums or plastic bags.

### 7. HANDLING AND STORAGE

- 7.1 HANDLING** Control dust formation. Do not eat, drink or smoke at the work place. Wash face and hands before eating, drinking or smoking. Will accumulate static charges that may cause an electric spark (ignition source). Take precautionary measures against static discharges.
- 7.2 STORAGE** Keep only in the original container. Keep container tightly closed. Keep in a cool, well ventilated place. Keep away from heat and direct sunlight. This product should be kept away from naked flames and other sources of ignition
- Storage Temperature:** Ambient.
- Storage Life:** Stable at ambient temperature.
- Specific use:** Industrial use only.



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### 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Provide adequate ventilation when using the material and follow the principles of good occupational hygiene to control personal exposures.

#### OCCUPATIONAL EXPOSURE LIMITS

| SUBSTANCE.                      | CAS No.    | LTEL (8 hr TWA ppm)                      | LTEL (8 hr TWA mg/m <sup>3</sup> ) | STEL (ppm) | STEL (mg/m <sup>3</sup> ) | Note:            |
|---------------------------------|------------|--|------------------------------------|------------|---------------------------|------------------|
| Linear Low Density Polyethylene | 26221-73-8 | No Occupational Exposure Limit assigned. |                                    |            |                           |                  |
| Dust.                           | -          |  | 10                                 |            |                           | Total Dust.      |
|                                 |            |  | 4                                  |            |                           | Respirable Dust. |



#### 8.1 Respirators

No special requirements. Provide adequate ventilation, including appropriate local extraction if dusts, fumes or vapours are likely to be evolved. Where engineering controls are not fitted or inadequate wear suitable respiratory protective equipment.



#### 8.2 Eye Protection

Eye protection with side protection (EN 166).



#### 8.3 Gloves

Wear suitable gloves if prolonged skin contact is likely. When dealing with hot material: Insulating gloves EN 407 (heat).

#### 8.4 Other

Protective working garments (e.g. safety shoes EN 344, long sleeved protective working garments). Contaminated clothing should be thoroughly cleaned.

#### 8.5 Environmental precautions

Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

### 9. PHYSICAL AND CHEMICAL PROPERTIES

|                                       |  |
|---------------------------------------|--|
| <b>Form</b>                           | Solid. Granular.   |
| <b>Colour</b>                         | White. Off-white.  |
| <b>Odour</b>                          | Odourless.   |
| <b>pH (Value)</b>                     | Not applicable.  |
| <b>Decomposition Temperature (°C)</b> | > 300 (572 °F)   |
| <b>Boiling Point (°C)</b>             | Not applicable.  |
| <b>Melting Point (°C)</b>             | 115 - 135 (239 - 275°F)  |
| <b>Flash Point (°C) [Closed cup]</b>  | > 300 (> 572 °F)   |
| <b>Auto Ignition Temperature (°C)</b> | > 300 (>572°F)   |
| <b>Explosive Properties</b>           | Not explosive. Unlikely to represent a dust hazard under normal handling conditions. Minimum explosive limit:: 10 mg/m <sup>3</sup> (typically). |
| <b>Minimum Ignition Energy (mJ)</b>   | 10 (typically)   |
| <b>Oxidising Properties</b>           | Not applicable.  |



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|                                |                 |
|--------------------------------|-----------------|
| Vapour Pressure (Pascal)       | Not applicable. |
| Specific Gravity               | 0.90 – 0.94     |
| Solubility (Water)             | Insoluble.      |
| Percent Volatile by volume (%) | < 0.1           |

### 10. STABILITY AND REACTIVITY

|   |   |
|---|---|
| 10.1 Chemical Stability                 | Stable under normal conditions. Decomposes at temperatures above 300°C. |
| 10.2 Conditions to avoid                | Heat and direct sunlight.   |
| 10.3 Materials to avoid                 | Direct contact with open flames, self igniting and explosive materials. |
| 10.4 Hazardous Decomposition Product(s) | Carbon monoxide, Carbon dioxide, Hydrocarbons and Acrid smoke.          |

### 11. TOXICOLOGICAL INFORMATION

Low toxicity under normal conditions of handling and use.

|                         |  |
|-------------------------|--|
| 11.1 Ingestion          | Low oral toxicity. Linear Low Density Polyethylene: LD50 (rat) : >5000 mg/kg   |
| 11.2 Inhalation         | Low acute toxicity. Dusts and vapours or fumes evolved during thermal processing may cause irritation to the respiratory system. |
| 11.3 Skin Contact       | No evidence of irritant effects from normal handling and use.  |
| 11.4 Eye Contact        | Dust may have irritant effect on eyes. Permanent damage is unlikely.   |
| 11.5 Long Term Exposure | Chronic effects are unlikely.  |

### 12. ECOLOGICAL INFORMATION

|  |  |
|--|--|
| 12.1 Environmental Fate and Distribution | Solid insoluble in water. Floats on water. The product has low mobility in soil. |
| 12.2 Persistence and Degradation         | The product is non-biodegradable.  |
| 12.3 Toxicity                            | Low toxicity to aquatic organisms.   |
| 12.4 Effect on Effluent Treatment        | Unlikely to affect biological treatment processes.                               |

### 13. DISPOSAL CONSIDERATIONS

|                             |  |
|-----------------------------|--|
| 13.1 Regulatory information | Do not allow to enter drains, sewers or watercourses. Disposal should be in accordance with local, state or national legislation.                        |
| 13.2 Recommended:           | Normal disposal is via incineration operated by an accredited disposal contractor. Refer to manufacturer/supplier for information on recovery/recycling. |

### 14. TRANSPORT INFORMATION

**International Transport Regulations:** Not classified as dangerous for transport.

|                      |                 |
|----------------------|-----------------|
| UN No.:              | Not applicable. |
| Road/Rail (ADR/RID): | Not applicable. |
| Class/Packing Group: | Not applicable. |
| IMDG Class           | Not applicable. |
| ICAO/IATA Class      | Not applicable. |



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### 15. REGULATORY INFORMATION

|                          |   |
|--------------------------|---|
| <b>EC Classification</b> | Not classified as dangerous for supply/use. |
| <b>Hazard Symbol</b>     | Not applicable.                             |
| <b>Risk Phrases</b>      | Not applicable.                             |
| <b>Safety Phrases</b>    | Not applicable.                             |

### INTERNATIONAL INVENTORIES

|                        |                                     |
|------------------------|-------------------------------------|
| <b>EINECS (Europe)</b> | EINECS: Polymer. Monomers included. |
|------------------------|-------------------------------------|

### 16. OTHER INFORMATION

This Material Safety Data Sheet was prepared in accordance with Directive 2001/58/EC and EC Regulation (EC) No. 1907/2006.

RELENE meets the requirements stipulated in IS 10146 on, 'Specification for Polyethylene and its copolymers for safe use in contact with foodstuff, pharmaceuticals and drinking water'. Additives incorporated in RELENE grades conform to the positive list of constituents as prescribed in IS 16738:2018. The product and the additives incorporated in it also comply with the FDA: CFR Title 21,177.1520 Olefin polymer.

The following sections contain revisions or new statements: 1 - 16

This Material Safety Data Sheet and the health, safety and environmental information it contains are intended to provide a summary of our knowledge and guidance regarding use of the designated Product. Its contents are offered in good faith as accurate and complete as of the date specified below, but without guarantee. The data herein applies only to the Product sold by entities of the Reliance group and not to products sold by others. It relates only to the Product and does not relate to its use in combination with any other product or material or in any process.

Local laws and regulations and conditions of use and suitability of the product for particular uses are beyond the control of Reliance; all risks of use, storage, handling, transportation and disposal of the Product are therefore assumed by the user and Reliance expressly disclaims all warranties of every kind and nature, including warranties of merchantability and fitness for a particular purpose in respect to the use or suitability of the Product. Reliance shall not be responsible for any damage or injury resulting from abnormal use of the Product, from any failure to adhere to recommendations, or from any hazards inherent in the nature of the Product.

Appropriate warnings and safe handling procedures should be provided to all handlers and users. In the case of a user in the European Union, as per Article 34 of REACH Regulation (EC) No. 1907/2006, user shall communicate to Reliance any new information on hazardous properties of the Product and/or new information relevant to risk management measures for the identified uses.

Alteration or re-publication of this document in whole or part is strictly prohibited.

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