# LIM 1922 Low Density Polyethylene Technical Datasheet

## Product Description:

LIM 1922 is a low-density polyethylene, offering a unique combination of consistent process-ability, flexibility and toughness. This grade developed for application that require a good balance between flow properties and mechanical properties. LIM 1922 has been manufactured under SABTEC licensed technology.

| | | | |
|---|---|---|---|
| **Form(s)** | Pellet | | |
| **Attribute** | Good toughness- Easy process ability- Producing flexible injection molded articles. | | |
| **Additives** | Antioxidant: Yes | Antiblock : No | Slip Agent :No |

## Features:

| Typical Properties | Typical Value [1] | Unit | Test Method |
|---|---|---|---|
| **Physical** | | | |
| High Load Melt Flow Index (190 °C/ 2.16 kg) | 22 | dg/min | ISO 1133 |
| Density [2] | 919 | $kg/m^3$ (A) | ISO 1183 |
| **Mechanical** [3] | | | |
| Stress at Yield | 8 | MPa | ISO 527-1,2 |
| Stress at Break | 7 | MPa | ISO 527-1,2 |
| Strain at Break | 400 | % | ISO 527-1,2 |
| Tensile Modulus | 175 | MPa | ISO 527-1,2 |
| Creep Modulus (After 1 hour) | 80 | MPa | ISO 899 |
| Creep Modulus (After 1000 hour) | 45 | MPa | ISO 899 |
| Notched lzod at +23°C | 42 | $kJ/m^2$ | ISO 180 A |
| Notched lzod at -30 °C | 5 | $kJ/m^2$ | ISO 180 A |
| Tensile-Impact strength (Notched, Type 1, Method 1B, -30°C) | 86 | $kJ/m^2$ | ISO 8256/1B |
| Hardness Shore D | 45 | - | ISO 868 |
| Ball Indentation Hardness | 16 | MPa | ISO 2039-1 |

| | | | |
|---|---|---|---|
| ESCR | 3 | hr. | SABTEC Method |
| Thermal 3 | | | |
| Deflection Temperature Under Load (0.45 MPa) | 39 | °C | ISO 75 |
| Vicat Softening Temperature (Method A/10N) | 82 | °C | ISO 306 |
| Melting Temperature | 105 | °C | ISO 3146 |
| Melting Enthalpy | 104 | J/g | ISO 3146 |

| **Recommended Process Conditions** [5] | |
|---|---|
| Extruder temperature profile: 180-210 °C | Mold temperature: 20-40 °C |

## Applications:

Injection molded articles (toys, household articles, caps, lids, etc.)- Base resin for master- batches.



### Health and Safety

The resin is manufactured to the highest standards, but special requirements apply to certain applications such as
food end-use contact and direct medical use. Specific information on regulatory compliance can be requested via customer.

Molten polymer may be degraded if it is exposed to air during any of the processing and off-line operations. The products of degradation may have an unpleasant odor. In higher concentrations they may cause irritation of the mucus membranes. Fabrication areas should be ventilated to carry away fumes or vapors. Legislation on the control of emissions and pollution prevention should be observed. Workers should be protected from the possibility of skin or eye contact with molten polymer.

The resin will burn when supplied with excess heat and oxygen. It should be handled and stored away from contact with direct flames and/or ignition sources. While burning, the resin contributes high heat and may generate a dense black smoke.

Recycled resins may have previously been used as packaging for, or may have otherwise been in contact with, hazardous goods. Converters are responsible for taking all necessary precautions to ensure that recycled resins are safe for continued use.

The detailed information about safety, handling, individual protection and waste disposal is provided in the relevant Safety Data Sheet. Additional specific information can be requested via customer.

### Conveying

Conveying equipment should be designed to prevent accumulation of fines and dust particles. These

particles can, under certain conditions pose an explosion hazard. We recommend that the conveying system will be equipped with adequate filters and be operated and maintained in the way that ensure no leaks develop.

**Storage**

Polyethylene resins should be protected from direct sunlight and/or heat during storage. The storage location should also be dry, dust free and the storage temperature should not exceed 50°C. It is also advisable to process polyethylene resins (in pelletized or powder from) within 6 months after delivery, because excessive aging of polyethylene can lead to a deterioration in quality.

The information provided in this Product Data Sheet has been based upon the current level of knowledge and experience. They are not to be interpreted as a warranty for specific product characteristics. In view of the many factors that may affect processing and application, these data do not relieve processors of the responsibility of carrying out their own tests and experiments; neither do they imply any legally binding assurance of certain properties or of suitability for a specific purpose. Customer is responsible for determining whether the products and the information in this document are appropriate for customer's use and for ensuring that customer's workplace and disposal practices are in compliance with applicable laws and other governmental enactments. Seller assumes no obligation or liability for the information in this document.

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