Technical Data Sheet

Moplen EP445L

Polypropylene, Impact Copolymer

Product Description

Moplen EP445L is a polypropylene impact copolymer with medium melt flow rate, suitable for compression and injection molding processes.
Moplen EP445L exhibits a good stiffness and impact strength balance, high stress cracking resistance and low stress whitening behaviour.
Moplen EP445L is nucleated, for faster crystallization rate and increased productivity. It contains both slip and antistatic additives, for easier demolding and low coefficient of friction.
Moplen EP445L is typically used in caps and closures. Other typical applications are in the field of housewares, toys and rigid packaging.

Regulatory Status

For regulatory compliance information, see *Moplen* EP445L Product Stewardship Bulletin (PSB) and Safety Data Sheet (SDS).

This grade is not intended for medical and pharmaceutical applications.

Status	Commercial: Active
Availability	Africa-Middle East; Europe
Application	Caps & Closures; Housewares; Sports, Leisure & Toys
Market	Consumer Products; Rigid Packaging
Processing Method	Compression Molding; Injection Molding
Attribute	Impact Copolymer; Medium Impact Resistance; Medium Slip; Medium Stiffness; Nucleated

Typical Properties	Nominal Value	Units	Test Method
Physical			
Melt Flow Rate, (230 °C/2.16 kg)	6	g/10 min	ISO 1133-1
Density, (23 °C)	0.90	g/cm³	ISO 1183-1
Mechanical			
Tensile Modulus	1500	MPa	ISO 527-1, -2
Tensile Stress at Yield	30	MPa	ISO 527-1, -2
Tensile Strain at Break	>50	%	ISO 527-1, -2
Tensile Strain at Yield	7	%	ISO 527-1, -2
Impact			
Charpy Impact Strength - Notched			
(23 °C, Type 1, Edgewise, Notch A)	8.5	kJ/m²	ISO 179
(0 °C, Type 1, Edgewise, Notch A)	4.5	kJ/m²	ISO 179
(-20 °C, Type 1, Edgewise, Notch A)	3.5	kJ/m²	ISO 179
Hardness			
Ball Indentation Hardness, (H 358/30)	64	MPa	ISO 2039-1
Thermal			
Vicat Softening Temperature, (A50)	151	°C	ISO 306
Heat Deflection Temperature B, (0.45 MPa, Unannealed)	100	°C	ISO 75B-1, -2

Notes

These are typical property values not to be construed as specification limits.

Further Information

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. For specific information on regulatory compliance contact your local representative.

Workers should be protected from the possibility of skin or eye contact with molten polymer. Safety glasses are suggested as a minimal precaution to prevent mechanical or thermal injury to the eyes.

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 vapours. Legislation on the control of emissions and pollution prevention should be observed.

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.

For further information about safety in handling and processing please refer to the Safety Data Sheet.

Conveying:

Conveying equipment should be designed to prevent production and accumulation of fines and dust particles that are contained in polymer resins. These particles can under certain conditions pose an explosion hazard. Conveying systems should be grounded, equipped with adequate filters and regularly inspected for leaks.

Storage:

The resin is packed in 25 kg bags, octabins or bulk containers protecting it from contamination. If it is stored under certain conditions, i. e. if there are large fluctuations in ambient temperature and the atmospheric humidity is high, moisture may condense inside the packaging. Under these circumstances, it is recommended to dry the resin before use. Unfavorable storage conditions may also intensify the resin's slight characteristic odor.

Resin should be protected from direct sunlight, temperatures above 40°C and high atmospheric humidity during storage. Higher storage temperatures may reduce the storage time.

The information submitted is based on our current knowledge and experience. 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. This information does not remove the obligation of the customer to inspect the material on arrival and notify us of any faults immediately. It is the responsibility of those to whom we supply our products to ensure that any proprietary rights and existing laws and legislation are observed.

Company Information

For further information regarding the LyondellBasell company, please visit http://www.lyb.com/.

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