Purell PE 3020 D

Polyethylene, Low Density

Product Description

Purell PE 3020 D is a low density polyethylene with high rigidity, good opticals and good chemical resistance. It is delivered in pellet form. The grade is used by our customers for small blow mouldings including packaging of pharmaceuticals in blow fill seal technology and injection moulding for medical devices, closures and seals.

Product Characteristics

Status	Commercial: Active
Test Method used	ISO ASTM
Availability	Europe, North America, Asia-Pacific, Australia/NZ, Africa-Middle East, Latin America
Processing Methods	Blow, Fill, & Seal, Blown Film, Extrusion Blow Molding, Injection Molding
Features	Good Chemical Resistance, Ethylene Oxide Sterilisation, Opticals, High Rigidity
Typical Customer Applications	Blow-fill-seal applications, Bottles and vials, Caps & Closures (Healthcare), Healthcare Applications, Medical Film

Typical Properties	Method	Value	Unit
Physical			
Melt Flow Rate *Note*: (190°C/2.16kg)	ASTM D 1238	0.3	g/10 min
Density	ASTM D 1505	0.927	g/cm³
Mechanical			
Flexural Modulus (1% Secant)	ASTM D 790	60000	psi
Tensile Modulus	ASTM D 638	63000	psi
Note: 1% Secant			
Tensile Strength @ Yield	ASTM D 638	2200	psi
Tensile Strength @ Break	ASTM D 638	2200	psi
Tensile Elongation @ Brk	ASTM D 638	700	%
ESCR	ASTM D 1693	16.0	hr
Thermal			
Vicat softening point	ASTM D 1525	102	°C
Heat deflection temperature at 0.46 N/mm2	ASTM D 648	46	°C

Additional Properties

Recommended film thickness: 60 to 150 µm

Recommended processing temperatures: 170°C to 220°C.

Notes

Typical properties; not to be construed as specifications.

Further Information

***Purell* PE 3020 D**

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. We recommend the conveying system used is equipped with adequate filters, is operated and maintained that no leak develops and adequate grounding exists at all times.

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 have an unpleasant odour. 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 must be observed. If the principles of sound manufacturing practice are adhered to and the place of work is well ventilated, no health hazards are involved in processing the resin.

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. In burning the resin contributes high heat and may generate a dense black smoke. Starting fires can be extinguished by water, developped fires should be extinguished by heavy foams forming an aqueous or polymeric film. For further information about safety in handling and processing please refer to the Material Safety Data Sheet.

Storage:
The resin is packed in 25 kg bags or in bulk containers protecting it from contamination. If it is stored under adverse 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. Unfavourable storage conditions may also intensify the resin´s slight characteristic odour.

The resin is subjected to degradation by ultra-violet radiations or by high storage temperatures. Therefore the resin must be protected from direct sunlight, temperatures above 40°C and high atmospheric humidity during storage. The resin can be stored over a period of more than 6 month without significant changes in the specified properties, appropriate storage conditions provided. Higher storage temperatures 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. The data do not relieve the customer from his obligation to control the resin upon arrival and to complain about faults. 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.

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LyondellBasell markets this product through the following entities:

- Equistar Chemicals, LP
- Basell Sales & Marketing Company B.V.
- Basell Asia Pacific Limited
- Basell International Trading FZE
- LyondellBasell Australia Pty Ltd

For the contact details of the LyondellBasell company selling this product in your country, please visit http://www.lyb.com/.

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This product(s) may not be used in:

(i) any U.S. FDA Class I, Health Canada Class I, and/or European Union Class I Medical Devices, without prior notification to Seller for each specific product and application; or

(ii) the manufacture of any of the following, without prior written approval by Seller for each specific product and application: (1) U.S. FDA Class II, Health Canada Class II or Class III, and/or European Union Class II Medical Devices; (2) film, overwrap and/or product packaging that is considered a part or component of one of the aforementioned Medical Devices; (3) packaging in direct contact with a pharmaceutical active ingredient and/or dosage form that is intended for inhalation, injection, intravenous, nasal, ophthalmic (eye), digestive, or topical (skin) administration; (4) tobacco related products and applications; (5) electronic cigarettes and similar devices; and (6) pressure pipe or fittings that are considered a part or component of a nuclear reactor.

(iii) Additionally, the product(s) may not be used in: (1) U.S. FDA Class III, Health Canada Class IV, and/or European Class III Medical Devices; (2) applications involving permanent implantation into the body; (3) life-sustaining medical applications; and (4) lead, asbestos or MTBE related applications.

All references to U.S. FDA, Health Canada, and European Union regulations include another country's equivalent regulatory classification.

Users should review the applicable Material Safety Data Sheet before handling the product.

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