

## LyondellBasell Petrothene® LP5002 High Density Polyethylene (Blow Molding Grade)

Category : Polymer , Thermoplastic , Polyethylene (PE) , HDPE , High Density Polyethylene (HDPE), Blow Molding Grade

### Material Notes:

**Applications**The PETROTHENE LP series of polyethylene resins exhibits excellent environmental stress crack resistance and is especially designed for bottles containing aggressive agricultural and household chemicals.  
**Regulatory Status**The LP 5002 base resin meets the requirements of Food and Drug Administration regulation, 21 CFR 177.1520. This regulation allows the use of this olefin polymer in "articles or components of articles intended for use in contact with food." Specific limitations or conditions of use may apply. Contact your Equistar sales representative for more information. **Processing Techniques**Specific recommendations for processing LP 5002 can only be made when the processing conditions, equipment and end use are known. For further suggestions, please contact your Equistar sales representative. This product is from the former Equistar product line.

Order this product through the following link:

[http://www.lookpolymers.com/polymer\\_LyondellBasell-Petrothene-LP5002-High-Density-Polyethylene-Blow-Molding-Grade.php](http://www.lookpolymers.com/polymer_LyondellBasell-Petrothene-LP5002-High-Density-Polyethylene-Blow-Molding-Grade.php)

Physical Properties	Metric	English	Comments
Density	0.946 g/cc	0.0342 lb/in <sup>3</sup>	ASTM D1505
Environmental Stress Crack Resistance	>= 1000 hour	>= 1000 hour	F <sub>50</sub> ; ASTM D1693
ESCR, Bottle	>= 1000 hour	>= 1000 hour	F <sub>50</sub> ; ASTM D2561
Melt Flow	0.20 g/10 min	0.20 g/10 min	ASTM D1238

Mechanical Properties	Metric	English	Comments
Hardness, Shore D	65	65	ASTM D2240
Tensile Strength, Yield	23.4 MPa	3400 psi	ASTM D638
Elongation at Break	>= 800 %	>= 800 %	ASTM D638
Flexural Modulus	0.965 GPa	140 ksi	ASTM D790
Tensile Impact	131 J/cm	245 ft-lb/in	ASTM D1822

Thermal Properties	Metric	English	Comments
Deflection Temperature at 0.46 MPa (66 psi)	66.0 °C	151 °F	ASTM D648
Vicat Softening Point	122 °C	252 °F	ASTM D1525
Brittleness Temperature	<= -76.0 °C	<= -105 °F	F <sub>50</sub> ; ASTM D746

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