

## Technical Data Sheet

### *Petrothene* LB500302



High Density Polyethylene

#### Product Description

*Petrothene* LB500302 is a polyethylene resin that exhibits excellent environmental stress crack resistance and is selected by customers for use in heavy duty bottles, such as those containing detergent and chemicals.

|                          |                                                        |
|--------------------------|--------------------------------------------------------|
| <b>Application</b>       | Bottles For Consumer Goods; Bottles for Industrial Use |
| <b>Market</b>            | Rigid Packaging                                        |
| <b>Processing Method</b> | Extrusion Blow Molding                                 |
| <b>Attribute</b>         | Good ESCR (Environmental Stress Cracking Resistance)   |

| Typical Properties                                                               | Nominal Value | English Units         | Nominal Value | SI Units          | Test Method |
|----------------------------------------------------------------------------------|---------------|-----------------------|---------------|-------------------|-------------|
| <b>Physical</b>                                                                  |               |                       |               |                   |             |
| Melt Flow Rate, (190 °C/2.16 kg)                                                 | 0.30          | g/10 min              | 0.30          | g/10 min          | ASTM D1238  |
| Density, (23 °C)                                                                 | 0.949         | g/cm <sup>3</sup>     | 0.949         | g/cm <sup>3</sup> | ASTM D1505  |
| <b>Mechanical</b>                                                                |               |                       |               |                   |             |
| Flexural Modulus, (1% Secant)                                                    | 170000        | psi                   | 1170          | MPa               | ASTM D790   |
| Tensile Strength at Yield                                                        | 3800          | psi                   | 26.2          | MPa               | ASTM D638   |
| Tensile Elongation at Break                                                      | >600          | %                     | >600          | %                 | ASTM D638   |
| Environmental Stress Crack Resistance, F <sub>50</sub><br>(100% Igepal®, Cond B) | 75            | hr                    | 75            | hr                | ASTM D1693  |
| <b>Impact</b>                                                                    |               |                       |               |                   |             |
| Tensile Impact Strength                                                          | 120           | ft-lb/in <sup>2</sup> | 252           | kJ/m <sup>2</sup> | ASTM D1822  |
| <b>Hardness</b>                                                                  |               |                       |               |                   |             |
| Shore Hardness, (Shore D)                                                        | 65            |                       | 65            |                   | ASTM D2240  |
| <b>Thermal</b>                                                                   |               |                       |               |                   |             |
| Vicat Softening Temperature                                                      | 252           | °F                    | 122           | °C                | ASTM D1525  |
| Low Temperature Brittleness, F <sub>50</sub>                                     | <-105         | °F                    | <-76          | °C                | ASTM D746   |
| Deflection Temperature Under Load, (66 psi, Unannealed)                          | 162           | °F                    | 72            | °C                | ASTM D648   |

## Notes

Igepal® is a registered trademark of Rhodia.

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

## Processing Techniques

Specific recommendations for resin type and processing conditions can only be made when the end use, required properties and fabrication equipment are known.

## Company Information

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

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