

## Technical Data Sheet

### *Petrothene* LT493701

High Density Polyethylene



#### Product Description

*Petrothene* LT493701 exhibits an enhanced balance of stiffness and environmental stress crack resistance. Typical applications include bottles for bleach, detergents, and household chemicals.

#### Regulatory Status

For regulatory compliance information, see *Petrothene* LT493701 [Product Stewardship Bulletin \(PSB\)](#) and [Safety Data Sheet \(SDS\)](#).

|                          |                                                        |
|--------------------------|--------------------------------------------------------|
| <b>Status</b>            | Commercial                                             |
| <b>Availability</b>      | North America                                          |
| <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>         | High 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)                        | 0.34          | g/10 min              | 0.34          | 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)                           | 157000        | psi                   | 1080          | MPa               | ASTM D790   |
| Tensile Strength at Yield                               | 3540          | psi                   | 24.4          | MPa               | ASTM D638   |
| Tensile Elongation at Break                             | 1330          | %                     | 1330          | %                 | ASTM D638   |
| Environmental Stress Crack Resistance, F <sub>50</sub>  | 300           | hr                    | 300           | hr                | ASTM D1693  |
| <b>Impact</b>                                           |               |                       |               |                   |             |
| Tensile Impact Strength                                 | 134           | ft-lb/in <sup>2</sup> | 282           | kJ/m <sup>2</sup> | ASTM D1822  |
| <b>Hardness</b>                                         |               |                       |               |                   |             |
| Shore Hardness, (Shore D)                               | 63            |                       | 63            |                   | ASTM D2240  |
| <b>Thermal</b>                                          |               |                       |               |                   |             |
| Vicat Softening Point                                   | 255           | °F                    | 124           | °C                | ASTM D1525  |
| Low Temperature Brittleness, F <sub>50</sub>            | <-105         | °F                    | <-76          | °C                | ASTM D746   |
| Deflection Temperature Under Load, (66 psi, Unannealed) | 149           | °F                    | 65            | °C                | ASTM D648   |

#### Notes

ESCR performed using 100% Igepal® CO-630, 50°C, where; Igepal® is a registered trademark of Rhodia.

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

#### Processing Techniques

LyondellBasell  
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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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- (ii) film, overwrap and/or product packaging that is considered a part or component of one of the aforementioned medical devices;
- (iii) 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;
- (iv) tobacco related products and applications, electronic cigarettes and similar devices.
- (v) safety components in automotive applications, for example: air bags, air bag unit housings and covers, seat belt mechanisms, brake systems, pedals and pedal supports, steering systems.

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- (ii) applications involving permanent implantation into the body;
- (iii) life-sustaining medical applications.

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