

Technical Data Sheet



Petrothene NA831000

Low Density Polyethylene

Product Description

Petrothene NA831000 resin exhibits high stress crack resistance and low temperature brittleness. Typical applications include housewares, containers and industrial parts.

Regulatory Status

For regulatory compliance information, see *Petrothene* NA831000 [Product Stewardship Bulletin \(PSB\)](#) and [Safety Data Sheet \(SDS\)](#).

Status	Commercial: Active
Availability	North America
Application	Bottles and Vials; Bottles For Consumer Goods; Bottles for Industrial Use; Clear Containers; Opaque Containers
Market	Rigid Packaging
Processing Method	Injection Molding

Typical Properties	Nominal Value	English Units	Nominal Value	SI Units	Test Method
Physical					
Melt Flow Rate, (190 °C/2.16 kg)	9.0	g/10 min	9.0	g/10 min	ASTM D1238
Density, (23 °C)	0.919	g/cm ³	0.919	g/cm ³	ASTM D1505
Mechanical					
Flexural Modulus, (1% Secant)	37000	psi	255	MPa	ASTM D790
Tensile Strength at Break	1230	psi	9	MPa	ASTM D638
Tensile Strength at Yield	1300	psi	9	MPa	ASTM D638
Tensile Elongation at Yield	14	%	14	%	ASTM D638
Hardness					
Shore Hardness, (Shore D)	48		48		ASTM D2240
Thermal					
Vicat Softening Temperature	184	°F	85	°C	ASTM D1525
Low Temperature Brittleness, F ₅₀	-85	°F	-65	°C	ASTM D746
Deflection Temperature Under Load, (66 psi, Unannealed)	104	°F	40	°C	ASTM D648



Notes

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/>.

© LyondellBasell Industries Holdings, B.V. 2026

Disclaimer

Information in this document is accurate to the best of our knowledge at the date of publication. The document is designed to provide users general information for safe handling, use, processing, storage, transportation, disposal and release and does not constitute any warranty or quality specification, either express or implied, including any warranty of merchantability or fitness for any particular purpose. Users shall determine whether the product is suitable for their use and can be used safely and legally.

In addition to any prohibitions of use specifically noted in this document, LyondellBasell may further prohibit or restrict the sale of its products into certain applications. For further information, please contact a LyondellBasell representative.

Trademarks

The Trademark referenced within the product name is owned or used by the LyondellBasell family of companies.

