

## LyondellBasell Petrothene® NA860008 Low Density Polyethylene

**Categories:** Polymer; Thermoplastic; Polyethylene (PE); LDPE; Low Density Polyethylene (LDPE), Molded

**Material** Applications

**Notes:** PETROTHENE NA 860 is a series of medium flow, low density polyethylene resins for the injection molding of caps, closures and other specialty applications. These resins exhibit an excellent balance of toughness, softness, dimensional stability and processability.

Regulatory Status

NA 860 meets the requirements of the 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 NA 860 can only be made when the processing conditions, equipment and end use are known. For further suggestions, contact your Equistar sales representative.

This product is from the former Equistar product line.

**Key Words:** LDPE

**Vendors:** [Click here](#) to view all available suppliers for this material.

Please [click here](#) if you are a supplier and would like information on how to add your listing to this material.

Physical Properties	Metric	English	Comments
Density	0.922 g/cc	0.0333 lb/in <sup>3</sup>	ASTM D1505
Melt Flow	25 g/10 min	25 g/10 min	ASTM D1238

Mechanical Properties	Metric	English	Comments
Hardness, Shore D	44	44	ASTM D2280
Tensile Strength at Break	8.48 MPa	1230 psi	Crosshead Speed - 20 in/min; ASTM D638
Tensile Strength, Yield	12.2 MPa	1770 psi	Crosshead Speed - 20 in/min; ASTM D638
Elongation at Yield	14 %	14 %	Crosshead Speed - 20 in/min; ASTM D638
1% Secant Modulus	221 MPa	32000 psi	Crosshead Speed - 1/2 in/min; ASTM D790
2% Secant Modulus	0.179 GPa	26.0 ksi	Crosshead Speed - 1/2 in/min; ASTM D790

Thermal Properties	Metric	English	Comments
Vicat Softening Point	92.0 °C	198 °F	ASTM D1525
Brittleness Temperature	-35.0 °C	-31.0 °F	F <sub>50</sub> , Test method has been found useful for specification purposes, but does not necessarily indicate the lowest temperature at which the material may be used.; ASTM D746

### Descriptive Properties

Antioxidant	Low
Slip	None

## LyondellBasell Alathon® H5618 High Density Polyethylene

**Categories:** [Polymer](#); [Thermoplastic](#); [Polyethylene \(PE\)](#); [HDPE](#); [High Density Polyethylene \(HDPE\)](#), [Injection Molded](#)

**Material** Applications

**Notes:** ALATHON H 5618 provides easy processing characteristics and exhibits excellent toughness properties and color as well as low odor and good processing stability. Typical applications include housewares, containers, caps and closures.

### Regulatory Status

H 5618 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 H 5618 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.

**Key Words:** HDPE

**Vendors:** [Click here](#) to view all available suppliers for this material.

Please [click here](#) if you are a supplier and would like information on how to add your listing to this material.

Physical Properties	Metric	English	Comments
Density	0.956 g/cc	0.0345 lb/in <sup>3</sup>	ASTM D1505
Melt Flow	18 g/10 min	18 g/10 min	ASTM D1238
Spiral Flow	33.0 cm	13.0 in	Measures the number on inches of flow produced when molten resin is injected into a long, spiral channel (0.625" insert), at a constant injection pressure of 1000 psi with a melt temperature of 440° F; Equistar

Mechanical Properties	Metric	English	Comments
Hardness, Shore D	69	69	ASTM D2240
Tensile Strength at Break	27.6 MPa	4000 psi	ASTM D638
Tensile Strength, Yield	29.0 MPa	4210 psi	Crosshead speed - 2"min.; ASTM D638
Elongation at Yield	7.7 %	7.7 %	Crosshead speed - 2"min.; ASTM D638
1% Secant Modulus	1376 MPa	199600 psi	Crosshead speed - 0.5" min; ASTM D790
2% Secant Modulus	1.15 GPa	167 ksi	Crosshead speed - 0.5" min; ASTM D790

Thermal Properties	Metric	English	Comments
Deflection Temperature at 0.46 MPa (66 psi)	75.0 °C	167 °F	ASTM D648
Vicat Softening Point	125 °C	257 °F	ASTM D1525
Brittleness Temperature	<= -76.0 °C	<= -105 °F	F <sub>50</sub> ; ASTM D746