

# Petrothene NA 870-252

## Low Density Polyethylene

### Injection Molding Grade

Flow Index 38.5

Density 0.921

#### Applications

PETROTHENE NA 870-252 exhibits an excellent balance of toughness and softness with excellent dimensional stability. This resin contains a mold release agent and displays excellent part ejection properties. Typical applications include caps and closures, housewares, toys, containers and novelty items.

#### Regulatory Status

NA 870-252 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 870-252 can only be made when the processing conditions, equipment and end use are known. For further suggestions, please contact your Equistar sales representative.

#### Suggested Start-up Conditions

Extruder Zone	Rear	Center	Front	Nozzle
Cylinder Temperature	325°F	350°F	350°F	350°F

#### Physical Properties

Property	Value	Units	ASTM Test Method
Melt Index	38.5	g/10 min.	D 1238
Density	0.921	g/cc	D 1505
Tensile Strength @ Break <sup>1</sup>	1,300 (9)	psi (MPa)	D 638
Tensile Strength @ Yield <sup>1</sup>	1,850 (13)	psi (MPa)	D 638
Elongation @ Yield <sup>1</sup>	13	%	D 638
1% Secant Modulus <sup>2</sup>	33,000 (230)	psi (MPa)	D 790
2% Secant Modulus <sup>2</sup>	27,000 (190)	psi (MPa)	D 790
Vicat Softening Point	187 (86)	°F (°C)	D 1525
Hardness, Shore D	41		D 2280
Low Temperature Brittleness, F <sub>50</sub> <sup>3</sup>	-13 (-25)	°F (°C)	D 746

<sup>1</sup> Crosshead Speed – 20 in/min

<sup>2</sup> Crosshead Speed - ½ in/min

<sup>3</sup> Test method has been found useful for specification purposes, but does not necessarily indicate the lowest temperature at which the material may be used.