

DOWLEX™ 2377

Polyethylene Resin

Overview

DOWLEX 2377 Polyethylene Resin is an ethylene/octene-1 copolymer produced in the proprietary solution process of The Dow Chemical Company. It has a unique molecular structure with a controlled side chain distribution, which provides excellent stress crack resistance properties combined with outstanding Long Term Hydrostatic Strength.

Applications:

Pipes for Industrial Applications, e.g.:

- Cooling water distribution
- District heating/cooling
- Desalination pipes
- Mono- and multi-layer pipe

Main Characteristics:

- Suitable for elevated temperatures without crosslinking
- Excellent processability
- Flexibility

Processing Recommendations:

- DOWLEX 2377 Polyethylene Resin is easy to process on traditional PE processing equipment. Typical extrusion temperatures for processing range from 190 to 230 °C. For further information see our Extrusion Guideline.

Note:

- The purchaser remains responsible for determining whether the use complies with all relevant regulations.

Additive	• Antiblock: No	• Slip: No	• Processing Aid: No
Physical	Nominal Value (English)	Nominal Value (SI)	Test Method
Density	0.941 g/cm³	0.941 g/cm³	ISO 1183
Melt Index			ISO 1133
190°C/2.16 kg	0.54 g/10 min	0.54 g/10 min	
190°C/5.0 kg	1.9 g/10 min	1.9 g/10 min	
Mechanical	Nominal Value (English)	Nominal Value (SI)	Test Method
Tensile Modulus			ISO 527-2
0.0787 in (2.00 mm), Compression Molded	93500 psi	645 MPa	
Tensile Stress			ISO 527-2/50
Yield, 0.0787 in (2.00 mm), Compression Molded	2940 psi	20.3 MPa	
Break, 0.0787 in (2.00 mm), Compression Molded	5370 psi	37.0 MPa	
Tensile Strain			ISO 527-2/50
Yield, 0.0787 in (2.00 mm), Compression Molded	14 %	14 %	
Break, 0.0787 in (2.00 mm), Compression Molded	780 %	780 %	
Flexural Modulus			ISO 178
0.0787 in (2.00 mm), Compression Molded	95700 psi	660 MPa	
Impact	Nominal Value (English)	Nominal Value (SI)	Test Method
Notched Izod Impact Strength	11 ft·lb/in²	23 kJ/m²	ISO 180
Hardness	Nominal Value (English)	Nominal Value (SI)	Test Method
Shore Hardness			ISO 868
Shore D, 0.0787 in (2.00 mm), Compression Molded	61	61	



Thermal	Nominal Value (English)	Nominal Value (SI)	Test Method
Vicat Softening Temperature	259 °F	126 °C	ISO 306
CLTE - Flow (68 to 158°F (20 to 70°C))	1.0E-4 in/in/°F	1.8E-4 cm/cm/°C	DIN 53752
Thermal Conductivity (140°F (60°C))	2.8 Btu·in/hr/ft²/°F	0.40 W/m/K	DIN 52612

Notes

These are typical properties only and are not to be construed as specifications. Users should confirm results by their own tests.

