

DOWLEX™ 2552 Polyethylene Resin

Overview

DOWLEX™ 2552E Polyethylene Resin is specifically designed to exhibit excellent low temperature flexibility and impact resistance with outstanding stress crack resistance in injection moulded parts. DOWLEX 2552E Polyethylene Resin injection mouldings also offer excellent toughness, dimensional stability and a high gloss.

Note: DOWLEX 2552E Polyethylene Resin should comply with FDA regulation 177.1520 and with most European food contact regulations when used unmodified and processed according to good manufacturing practices for food contact applications. Please, contact your nearest Dow office for food contact compliance statements. The purchaser remains responsible for determining whether the use complies with all relevant regulations.

Applications:

- Housewares.
- Lids.
- Toys.
- Winter sports articles.
- Industrial caps and closures.

Physical	Nominal Value (English)	Nominal Value (SI)	Test Method
Density	0.920 g/cm ³	0.920 g/cm ³	ASTM D792 ¹
Melt Mass-Flow Rate (MFR) (190°C/2.16 kg)	25 g/10 min	25 g/10 min	ISO 1133
Molding Shrinkage - Flow	0.024 in/in	2.4 %	ASTM D955
Environmental Stress-Cracking Resistance			ASTM D1693 ²
122°F (50°C), 100% AntaroX, Compression Molded	6.70 hr	6.70 hr	
122°F (50°C), 100% AntaroX, Injection Molded	1.20 hr	1.20 hr	
Spiral Flow Length	42.7 in	108.50 cm	Dow Method ¹
Mechanical	Nominal Value (English)	Nominal Value (SI)	Test Method
Tensile Modulus - 2% Secant			ASTM D638
Compression Molded	37100 psi	256 MPa	
Injection Molded	22500 psi	155 MPa	
Tensile Strength			ASTM D638
Yield, Compression Molded	1740 psi	12.0 MPa	
Yield, Injection Molded	1030 psi	7.10 MPa	
Break, Injection Molded	> 1680 psi	> 11.6 MPa	
Tensile Elongation (Break, Injection Molded)	> 870 %	> 870 %	ASTM D638
Impact	Nominal Value (English)	Nominal Value (SI)	Test Method
Notched Izod Impact			
-4°F (-20°C), Injection Molded	No Break	No Break	ASTM D256
-40°F (-40°C), Injection Molded	42.8 ft·lb/in ²	90.0 kJ/m ²	ASTM D256
73°F (23°C), Injection Molded	No Break	No Break	ASTM D256
Tensile Impact Strength (Compression Molded)	50.0 ft·lb/in ²	105 kJ/m ²	ISO 8256
Hardness	Nominal Value (English)	Nominal Value (SI)	Test Method
Durometer Hardness			ASTM D2240
Shore D, Compression Molded	48	48	
Thermal	Nominal Value (English)	Nominal Value (SI)	Test Method
Vicat Softening Temperature	198 °F	92.0 °C	ASTM D1525

Notes

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

¹ 220°C, 3 mm channel depth, constant injection pressure, mould temperature 15°C.

² Notched

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- c. use as a critical component in medical devices that support or sustain human life; or
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