



DOW™ HDPE 17450N

High Density Polyethylene Resin

Overview

- For toys and housewares
- Good low temperature impact strength, gloss and excellent toughness
- Complies with U.S. FDA 21 CFR 177.1520 (c) 3.2a.

Consult the regulations for complete details.

DOW HDPE 17450N is a narrow molecular weight distribution copolymer designed to offer low temperature impact strength and gloss with excellent toughness. This resin has good processability over a wide range of molding conditions.

Additive

- Antiblock: No
- Slip: No
- Processing Aid: No

Physical	Nominal Value (English)	Nominal Value (SI)	Test Method
Density	0.950 g/cm ³	0.950 g/cm ³	ASTM D792
Base Density ¹	0.950 g/cm ³	0.950 g/cm ³	Dow Method
Melt Index (190°C/2.16 kg)	17 g/10 min	17 g/10 min	ASTM D1238
Environmental Stress-Cracking Resistance (ESCR)			ASTM D1693
122°F (50°C), 100% Igepal, F50	3.00 hr	3.00 hr	
Mechanical	Nominal Value (English)	Nominal Value (SI)	Test Method
Tensile Strength			ASTM D638
Yield	3300 psi	22.8 MPa	
Break	1800 psi	12.4 MPa	
Tensile Elongation			ASTM D638
Yield	3.0 %	3.0 %	
Break	300 %	300 %	
Flexural Modulus - 2% Secant	114000 psi	786 MPa	ASTM D790B
Impact	Nominal Value (English)	Nominal Value (SI)	Test Method
Tensile Impact Strength ²	140 ft·lb/in ²	294 kJ/m ²	ASTM D1822
Hardness	Nominal Value (English)	Nominal Value (SI)	Test Method
Durometer Hardness	62	62	ASTM D2240
Thermal	Nominal Value (English)	Nominal Value (SI)	Test Method
Deflection Temperature Under Load			ASTM D648
66 psi (0.45 MPa), Unannealed	149 °F	65.0 °C	
Brittleness Temperature	< -105 °F	< -76.1 °C	ASTM D746
Vicat Softening Temperature	259 °F	126 °C	ASTM D1525
Melting Temperature (DSC)	262 °F	128 °C	Dow Method
Peak Crystallization Temperature (DSC)	239 °F	115 °C	Dow Method

Additional Information

Plaque molded and tested in accordance with ASTM D4976.

Notes

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

¹ Base density is estimated using the assumption that every 1000 ppm of antiblock in the finished product raises the density of the polymer by 0.0006 g/cm³. Base density is the estimated density of the polymer if it did not contain any antiblock.

² Type S

