

# DOW Polyethylene 12450N

## High Density

- For structural foam, tote boxes and industrial containers
- Excellent impact strength and toughness and moderate stiffness
- Complies with U.S. FDA 21 CFR 177.1520 (c) 3.2a.  
Consult the regulations for complete details.

Polyethylene 12450N High Density is narrow molecular weight distribution polymer designed to offer excellent impact strength and toughness with moderate stiffness. This resin has excellent processability over a wide range of molding conditions.

Physical Properties	Test Method	Values <sup>(1)</sup> English (SI)
<b>Resin Properties</b>		
Melt Index, g/10 min	ASTM D 1238	12
Density, g/cc	ASTM D 792	0.950
DSC Melting Point, °F (°C)	Dow Method	265 (129)
Vicat Softening Point, °F (°C)	ASTM D 1525	253 (123)
<b>Molded Part Properties<sup>(2)</sup></b>		
Tensile Yield <sup>(3)</sup> , psi (MPa)	ASTM D 638	2700 (19)
Ultimate Tensile <sup>(3)</sup> , psi (MPa)	ASTM D 638	2700 (19)
Ultimate Elongation <sup>(3)</sup> , %	ASTM D 638	650
Notched Izod Impact	ASTM D 256	@ -50°C, ft-lbf/in. (J/m)
		@ 23°C, ft-lbf/in. (J/m)
Flexural Modulus, psi (MPa)	ASTM D 790	120,000 (827)
Tensile Modulus, 2% Secant, psi (MPa)	ASTM D 790	81,000 (558)

### Fabrication Conditions For Injection Molding:

- Molded using DEMAG 150
- Barrel Temperature<sup>(4)</sup>: 374°F (190°C)
- Chill Water Temperature: 55°F (13°C)
- Cycle Time: 200 seconds
- Fill Time: 1 second
- Hold Time: 5 seconds

- (1) Typical values, not to be construed as specifications. Users should confirm results by their own tests.
- (2) Testing performed on injection molded ASTM test specimens (0.125 in.). Properties will vary with changes in molding conditions.
- (3) Crosshead speed 2.0 in./min.
- (4) Recommend do not exceed 550°F (288°C) barrel temperature.

