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/cm³	0.950	g/cm³	ASTM D792
Base Density [1]	0.950	g/cm³	0.950	g/cm³	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/in²	294	kJ/m²	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

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Additional Information

North America		**Europe/Middle East**	+800-3694-6367
U.S. & Canada:	1-800-441-4369		+31-11567-2626
	1-989-832-1426	Italy:	+800-783-825
Mexico:	+1-800-441-4369		
Latin America		**South Africa**	+800-99-5078
Argentina:	+54-11-4319-0100		
Brazil:	+55-11-5188-9000		
Colombia:	+57-1-219-6000	**Asia Pacific**	+800-7776-7776
Mexico:	+52-55-5201-4700		+603-7965-5392

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