Technical Information

DOW™ HDPE DPDA-3220 NT 7
High Density Polyethylene Resin

Overview

Dow DPDA-3220 NT 7 High Density Polyethylene Resin is produced via UNIPOL™ Process Technology from Dow and is intended for rotational and injection molding is specifically designed for applications requiring excellent processability and aesthetics combined with low warpage and good mechanical properties. Processing and Stabilization: Dow DPDA-3220 NT 7 High Density Polyethylene Resin is fully heat and UV stabilized resulting in a wide processing latitude, good color retention and long life expectancy.

- Rotational molding or injection molding
- For Large Agricultural Tanks, Intermediate Bulk Containers, Potable Water, Chemical Tanks and Industrial Products
- Excellent impact strength, stress crack resistance and processability

Complies with:

- U.S. FDA 21 CFR 177.1520 (c)3.1a
- Canadian HPFB No Objection
- European Commission Regulation (EU) No 10/2011

Consult the regulations for complete details.

Additive

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

Physical	Nominal Value	(English)	Nominal Value	(SI)	Test Method
Density	0.942	g/cm³	0.942	g/cm³	ASTM D792
Base Density [1]	0.942	g/cm³	0.942	g/cm³	Dow Method
Melt Index (190°C/2.16 kg)	2.0	g/10 min	2.0	g/10 min	ASTM D1238
Environmental Stress-Cracking Resistance (ESCR) [2]					
122°F (50°C), 100% Igepal, F50	> 743	hr	> 743	hr	ASTM D1693A
122°F (50°C), 100% Igepal, F50	> 1000	hr	> 1000	hr	ASTM D1693B
Mechanical	**Nominal Value**	**(English)**	**Nominal Value**	**(SI)**	**Test Method**
Tensile Strength [2] (Yield)	3100	psi	21.4	MPa	ASTM D638
Tensile Elongation [2]					ASTM D638
Yield	12	%	12	%	
Break	710	%	710	%	
Flexural Modulus [2]					ASTM D790B
--	143000	psi	986	MPa	
1% Secant	107000	psi	738	MPa	
Impact	**Nominal Value**	**(English)**	**Nominal Value**	**(SI)**	**Test Method**
Impact Strength					ARM
-40°F (-40°C), 0.250 in (6.35 mm), Rotational Molded	> 200	ft·lb	> 271	J	
Thermal	**Nominal Value**	**(English)**	**Nominal Value**	**(SI)**	**Test Method**
Deflection Temperature Under Load [2]					ASTM D648
66 psi (0.45 MPa), Unannealed	132	°F	55.6	°C	
264 psi (1.8 MPa), Unannealed	107	°F	41.7	°C	
Melting Temperature (DSC)	261	°F	127	°C	Dow Method

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] Plaque molded and tested in accordance with ASTM D4976.