Technical Information

DOW™ HDPE DMDA-8910 NT 7
High Density Polyethylene Resin

Overview

DOW™ DMDA-8910 NT 7 High Density Polyethylene (HDPE) Resin is produced by the UNIPOL™ Process Technology from Dow and is intended for use in injection molded rigid packaging applications including material handling and industrial container applications. The resin is designed to meet rigorous performance characteristics, including environmental stress crack resistance and impact strength, while maintaining excellent processing characteristics beneficial for molders.

Main Characteristics:

- Injection or Compression Molding
- Designed for caps and closures
- Excellent impact strength, stress crack resistance and processability
- Very narrow molecular weight distribution
- Excellent Organoleptic properties

Complies with:

- U.S. FDA 21 CFR 177.1520(c)3.2a
- Canadian HPFB No Objection

Consult the regulations for complete details.

Additive

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

Physical	Nominal Value	(English)	Nominal Value	(SI)	Test Method
Density	0.945	g/cm³	0.945	g/cm³	ASTM D792
Melt Index (190°C/2.16 kg)	10	g/10 min	10	g/10 min	ASTM D1238
Environmental Stress-Cracking Resistance (ESCR)					ASTM D1693
122°F (50°C), 100% Igepal, F50	12.0	hr	12.0	hr	
Mechanical	**Nominal Value**	**(English)**	**Nominal Value**	**(SI)**	**Test Method**
Tensile Strength					ASTM D638
Yield	3500	psi	24.1	MPa	
Break	2300	psi	15.9	MPa	
Tensile Elongation					ASTM D638
Yield	9.0	%	9.0	%	
Break	260	%	260	%	
Flexural Modulus					ASTM D790B
1% Secant	145000	psi	1000	MPa	
2% Secant	124000	psi	855	MPa	
Impact	**Nominal Value**	**(English)**	**Nominal Value**	**(SI)**	**Test Method**
Tensile Impact Strength [1]	59.0	ft·lb/in²	124	kJ/m²	ASTM D1822
Hardness	**Nominal Value**	**(English)**	**Nominal Value**	**(SI)**	**Test Method**
Durometer Hardness (Shore D)	59		59		ASTM D2240
Thermal	**Nominal Value**	**(English)**	**Nominal Value**	**(SI)**	**Test Method**
Deflection Temperature Under Load					ASTM D648
66 psi (0.45 MPa), Annealed	149	°F	65.0	°C	
Brittleness Temperature	< -105	°F	< -76.1	°C	ASTM D746
Vicat Softening Temperature	254	°F	123	°C	ASTM D1525
Melting Temperature (DSC)	262	°F	128	°C	Dow Method
Peak Crystallization Temperature (DSC)	241	°F	116	°C	Dow Method
Additional Information					
Molded and tested in accordance with ASTM D4976.					