



Technical Data Sheet

DOW™ HDPE DMDA-8921 NT 7 High Density Polyethylene Resin

Description

DOW™ DMDA-8921 NT 7 High Density Polyethylene (HDPE) Resin is produced via UNIPOL™ Process Technology from Dow and is intended for use in a broad range of injection molding applications such as housewares, toys, food containers and pails. This resin has been designed to provide an excellent balance of toughness, environmental stress crack resistance and processability.

Main Characteristics

- Injection molding
- For injection molded housewares, toys, food containers and pails
- Excellent balance of toughness, stress crack resistance and processability
- Very narrow molecular weight distribution

Complies with

- U.S. FDA 21 CFR 177.1520(c)3.2a

Consult the regulations for complete details.

Additive

- Antiblock: No
- Processing aid: No
- Slip: No

Properties¹

Physical	Nominal Value	Unit (English)	Nominal Value	Unit (SI)	Test Method ²
Density	0.954	g/cm ³	0.954	g/cm ³	ASTM D792
Base Density ³	0.954	g/cm ³	0.954	g/cm ³	Internal Method
Melt Index (190°C/2.16 kg)	21.5	g/10 min	20	g/10 min	ASTM D1238
Environmental Stress-Cracking Resistance (ESCR) 122°F (50°C), 100% Igepal, F50	3.00	hr	3.00	hr	ASTM D1693
Mechanical					
Tensile Strength					ASTM 638
Yield	4100	Psi	28.3	MPa	
Break	2000	Psi	13.8	MPa	
Tensile Elongation					ASTM 638
Yield	7.0	%	7.0	%	
Break	250	%	250	%	



Properties (Cont.)

Mechanical	Nominal Value	Unit (English)	Nominal Value	Unit (SI)	Test Method
Flexural Modulus – 2% Secant	167000	Psi	1150	MPa	ASTM D790B
Impact					
Tensile Impact Strength ⁴	20.0	ft-lb/in ²	42.0	kJ/m ²	ASTM D1822
Hardness					
Durometer Hardness (Shore D)	57		57		ASTM D2240
Thermal					
Deflection Temperature Under Load 66 psi (0.45 MPa), Unannealed	163	°F	72.8	°C	ASTM D648
Brittleness Temperature	< -105	°F	< -76.1	°C	ASTM D746
Vicat Softening Temperature	261	°F	124	°C	ASTM D1525
Melting Temperature (DSC)	266	°F	130	°C	Internal Method
Peak Crystallization Temperature (DSC)	243	°F	117	°C	Internal Method
Additional Information					
Plaque molded and tested in accordance with ASTM D4976					

