



Technical Data Sheet

UNIVAL™ DMDA-6400 NT 7 High Density Polyethylene Resin

Description

UNIVAL™ DMDA-6400 NT 7 High Density Polyethylene (HDPE) Resin is a multi-purpose HDPE homopolymer designed for producing blow molded containers used to package dairy, water, and fruit drinks. The product offers high stiffness, excellent taste and odor characteristics, and produces very white bottles. The resin can be blow molded or thermoformed into other thin-walled parts for food packaging and houseware items.

Main Characteristics

- Maximum rigidity
- High impact strength
- Top load strength
- Moderate swell

Complies with

- U.S. FDA 21 CFR 177.1520(c)2.2
- EU, No 10/2011
- Canadian HPFB No Objection (with Limitations)

Consult the regulations for complete details.

Additive

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

Properties¹

Physical	Nominal Value	Unit (English)	Nominal Value	Unit (SI)	Test Method ²
Density	0.961	g/cm ³	0.961	g/cm ³	ASTM D792
Melt Index					ASTM D1238
190°C/2.16 kg	0.80	g/10 min	0.80	g/10 min	
190°C/21.6 kg	57	g/10 min	57	g/10 min	
Environmental Stress-Cracking Resistance (ESCR)					ASTM D1693
122°F (50°C), 100% Igepal, F50	20.0	hr	20.0	hr	
Mechanical					
Tensile Strength					ASTM D638
Yield	4640	psi	32.0	MPa	
Break	3480	psi	24.0	MPa	
Tensile Elongation					ASTM D638
Yield	7.0	%	7.0	%	
Break	1000	%	1000	%	

1. Typical properties: these are not to be construed as specifications. Users should confirm results by their own tests.
2. ASTM: American Society for Testing and Materials



Properties (Cont.)

Mechanical	Nominal Value	Unit (English)	Nominal Value	Unit (SI)	Test Method
Flexural Modulus – 2% Secant	188000	psi	1300	MPa	ASTM D790B
Impact					
Tensile Impact Strength ³	40.0	ft·lb/in ²	84.0	kJ/m ²	ASTM D1822
Hardness					
Durometer Hardness (Shore D)	66		66		ASTM D2240
Thermal					
Deflection Temperature Under Load 66 psi (0.45 MPa), Unannealed	169	°F	76.0	°C	ASTM D648
Brittleness Temperature	< -105	°F	< -76.0	°C	ASTM D746
Vicat Softening Temperature	268	°F	131	°C	ASTM D1525
Melting Temperature (DSC)	271	°F	133	°C	Internal Method
Peak Crystallization Temperature (DSC)	248	°F	120	°C	Internal Method
Additional Information					
Compression molded and tested in accordance with ASTM D4976					

3. Type S

Product Stewardship

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Medical Applications Policy

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- long-term or permanent contact with internal bodily fluids or tissues. "Long-term" is contact which exceeds 29 calendar days;
- use in cardiac prosthetic devices regardless of the length of time involved ("cardiac prosthetic devices" include, but are not limited to, pacemaker leads and devices, artificial hearts, heart valves, intra-aortic balloons and control systems, and ventricular bypass-assisted devices);
- use as a critical component in medical devices that support or sustain human life; or
- use specifically by pregnant women or in applications designed specifically to promote or interfere with human reproduction.
- use as an ingredient of a pharmaceutical injectable application



Medical Applications Policy (Cont.)

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