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

Properties[1]

Physical	Nominal Value	Unit (English)	Nominal Value	Unit (SI)	Test Method[2]
Density	0.961	g/cm³	0.961	g/cm³	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
122ºF (50ºC), 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	%	

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					
Defflection Temperature Under Load					ASTM D648
66 psi (0.45 MPa), Unannealed	169	°F	76.0	°C	
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					