UNIVAL™ DMDH-6401 NT 7

The Dow Chemical Company - High Density Polyethylene Resin

Tuesday, November 5, 2019

General Information

Product Description

UNIVAL™ DMDH-6401 NT 7 High Density Polyethylene (HDPE) Resin is a multi-purpose polymer designed for stiffness enhancement of heavy duty shipment sacks and other films. In addition, it can be blow molded into bottles and other thin-walled parts and houseware items.

Overview

- Maximum stiffness
- High Tensile strength
- Top load strength
- Good barrier properties
- Facilitates Downgauging

Complies with:

- U.S. FDA 21 CFR 177.1520 (c) 2.2
- EU, No 10/2011

Consult the regulations for complete details.

General			
Material Status	• Commercial: Active		
Availability	• Latin America	• North America	
Additive	• Antiblock: No	• Processing Aid: No	• Slip: No
Agency Ratings	• EU No 10/2011	• FDA 21 CFR 177.1520(c) 2.2	
Forms	• Pellets		
Processing Method	• Blow Molding		

ASTM & ISO Properties [1]

Physical	Nominal Value	Unit	Test Method
Density / Specific Gravity	0.963		ASTM D792
Melt Mass-Flow Rate			ASTM D1238
190°C/2.16 kg	0.80	g/10 min	
190°C/21.6 kg	57	g/10 min	
Environmental Stress-Cracking Resistance (ESCR)			ASTM D1693
122°F, 100% Igepal, F50	20.0	hr	
Mechanical	**Nominal Value**	**Unit**	**Test Method**
Tensile Strength (Yield)	4600	psi	ASTM D638
Tensile Strength (Break)	3500	psi	ASTM D638
Tensile Elongation (Yield)	7.0	%	ASTM D638
Tensile Elongation (Break)	1000	%	ASTM D638
Flexural Modulus - 2% Secant	188000	psi	ASTM D790B
Impact	**Nominal Value**	**Unit**	**Test Method**
Tensile Impact Strength [2]	40.0	ft·lb/in²	ASTM D1822
Hardness	**Nominal Value**	**Unit**	**Test Method**
Durometer Hardness (Shore D)	66		ASTM D2240
Thermal	**Nominal Value**	**Unit**	**Test Method**
Deflection Temperature Under Load (66 psi, Unannealed)	169	°F	ASTM D648
Brittleness Temperature	< -105	°F	ASTM D746

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Thermal	Nominal Value	Unit	Test Method
Vicat Softening Temperature	268	°F	ASTM D1525
Melting Temperature (DSC)	271	°F	Internal Method
Peak Crystallization Temperature (DSC)	248	°F	Internal Method

Additional Information

Plaque molded and tested in accordance with ASTM D4976.

Notes

[1] Typical properties: these are not to be construed as specifications.

[2] Type S