UNIVAL™ DMDC-6143 NT 7

The Dow Chemical Company - High Density Polyethylene Resin

Tuesday, November 5, 2019

General Information

Product Description

- Outstanding environmental stress crack resistance
- Excellent parison melt strength / low sag
- Good extrudability / processability
- Good rigidity
- Complies with U.S. FDA 21 CFR 177.1520 (c) 3.2a
- Complies with Canadian HPFB No Objection (With Limitations)
- Complies with EU, No 10/2011
- Consult the regulations for complete details.

UNIVAL™ DMDC-6143 NT 7 High Density Polyethylene (HDPE) Resin is a polymer with broad molecular weight distribution and high molecular weight polymer. This product provides good stability, which contributes to uniform wall thickness in large parts, making it ideal for blow molding of containers, such as the 5-30 gallon (19-114 liter) tight-head pails, and other large parts. The broad molecular weight distribution of this resin contributes to the outstanding environmental stress crack resistance (ESCR), good rigidity level and extrudability it offers.

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) 3.2a	• HPFB (Canada) No Objection [1]
Forms	• Pellets		
Processing Method	• Blow Molding		

ASTM & ISO Properties [2]

Physical	Nominal Value	Unit	Test Method
Density / Specific Gravity	0.954		ASTM D792
Melt Mass-Flow Rate (190°C/21.6 kg)	14	g/10 min	ASTM D1238
Environmental Stress-Cracking Resistance (ESCR)			ASTM D1693
122°F, 100% Igepal, F50	1100	hr	
Mechanical	**Nominal Value**	**Unit**	**Test Method**
Tensile Strength (Yield)	3400	psi	ASTM D638
Tensile Strength (Break)	5500	psi	ASTM D638
Tensile Elongation (Yield)	10	%	ASTM D638
Tensile Elongation (Break)	900	%	ASTM D638
Flexural Modulus - 2% Secant	148000	psi	ASTM D790B
Impact	**Nominal Value**	**Unit**	**Test Method**
Tensile Impact Strength [3]	170	ft·lb/in²	ASTM D1822
Hardness	**Nominal Value**	**Unit**	**Test Method**
Durometer Hardness (Shore D)	65		ASTM D2240
Thermal	**Nominal Value**	**Unit**	**Test Method**
Deflection Temperature Under Load (66 psi, Unannealed)	153	°F	ASTM D648
Brittleness Temperature	< -105	°F	ASTM D746
Vicat Softening Temperature	264	°F	ASTM D1525
Melting Temperature (DSC)	268	°F	Internal Method
Peak Crystallization Temperature (DSC)	257	°F	Internal Method

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Additional Information

Plaque molded and tested in accordance with ASTM D4976.

Notes

[1] With limitations

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

[3] Type S