DOW™ HDPE DMDA-8007 NT 7

High Density Polyethylene Resin

The Dow Chemical Company

Message:

Excellent stiffness/modulus
Excellent warp resistance
Molded parts have high gloss, low odor
For injection molded crates, cases, totes, and other parts needing high modulus
Complies with U.S. FDA 21 CFR 177.1520 (c)2.2
Complies with Canadian HPFB No Objection
Complies with EU, No 10/2011
Consult the regulations for complete details.
DOW DMDA-8007 NT 7 High Density Polyethylene (HDPE) Resin is a narrow molecular weight distribution high density homopolymer designed to offer excellent stiffness, low warpage, good/acceptable toughness, and good moldability. This resin is ideally suited for injection molded crates, cases, trays, tote bins, and other objects requiring high rigidity. This resin is also suitable for cast film extrusion processing.

General Information	
Agency Ratings	FDA 21 CFR 177.1520(c) 2.2 HPFB (Canada) No Objection Europe No 10/2011
Forms	Particle
Processing Method	cast film Injection molding

Physical	Nominal Value	Unit	Test Method
Specific Gravity	0.965	g/cm³	ASTM D792
Melt Mass-Flow Rate (MFR)			ASTM D1238
190°C/2.16 kg	8.3	g/10 min	ASTM D1238
190°C/21.6 kg	180	g/10 min	ASTM D1238
Environmental Stress-Cracking Resistance [1] (50°C, 100% Igepal, F50)	2.00	hr	ASTM D1693
Hardness	**Nominal Value**	**Unit**	**Test Method**
Durometer Hardness [2] (Shore D)	61		ASTM D2240
Mechanical	**Nominal Value**	**Unit**	**Test Method**
Tensile Strength [3]			ASTM D638
Yield	31.0	MPa	ASTM D638
Fracture	17.9	MPa	ASTM D638
Tensile Elongation [4]			ASTM D638
Yield	6.0	%	ASTM D638
Fracture	350	%	ASTM D638
Flexural Modulus - 2% Secant [5]	1410	MPa	ASTM D790B
Films	**Nominal Value**	**Unit**	**Test Method**

Film Thickness - Tested	25	µm	
Film Puncture Resistance (25 µm)	0.579	J/cm³	Internal method
secant modulus			ASTM D882
2% secant, MD: 25 µm, cast film	798	MPa	ASTM D882
2% secant, TD: 25 µm, cast film	935	MPa	ASTM D882
Tensile Strength			ASTM D882
MD: Yield, 25 µm, extruded film	20.4	MPa	ASTM D882
TD: Yield, 25 µm, extruded film	22.4	MPa	ASTM D882
Tensile Elongation			ASTM D882
MD: Broken, 25 µm, extruded film	670	%	ASTM D882
TD: Broken, 25 µm, extruded film	490	%	ASTM D882
Dart Drop Impact (25 µm, Cast Film)	24	g	ASTM D1709A
Elmendorf Tear Strength			ASTM D1922
MD: 25 µm, cast film	36	g	ASTM D1922
TD: 25 µm, cast film	160	g	ASTM D1922
Impact	**Nominal Value**	**Unit**	**Test Method**
Tensile Impact Strength	168	kJ/m²	ASTM D1822
Thermal	**Nominal Value**	**Unit**	**Test Method**
Deflection Temperature Under Load [6] (0.45 MPa, Unannealed)	83.9	°C	ASTM D648
Brittleness Temperature [7]	< -76.1	°C	ASTM D746
Vicat Softening Temperature	131	°C	ASTM D1525
Melting Temperature (DSC)	133	°C	Internal method
Peak Crystallization Temperature (DSC)	120	°C	Internal method
Optical	**Nominal Value**	**Unit**	**Test Method**
Gloss (45, 25.4 µm, cast film)	75		ASTM D2457
Haze (25.4 µm, Cast Film)	8.0	%	ASTM D1003
Extrusion	**Nominal Value**	**Unit**	
Melt Temperature	260	°C	
Extrusion instructions			

铸造薄膜的制造条件:
螺杆 A,尺寸:2 英寸 (51 mm);30:1 L/D
螺杆速度:39 rpm
螺杆 B,尺寸:2.5 英寸 (63.5 mm); 30:1 L/D
螺杆速度:39 rpm
螺杆 C,尺寸:2.5 英寸 (63.5 mm);30:1 L/D
螺杆速度:39 rpm
螺杆 D,尺寸:2.5 英寸 (63.5 mm);30:1 L/D
螺杆速度:39 rpm
螺杆 E,尺寸:2 英寸 (51 mm);30:1 L/D
螺杆速度:39 rpm
螺杆类型:DSB II
熔体温度:500°F (261°C)
冷却辊温度:70°F (21°C)
生产线速度:400 fpm(123 米/分)
输出:426 磅/小时
模具宽度:36 英寸 (914 mm)
模具间隙:25 密尔 (0.6 mm)

NOTE	
1.	Molding and testing according to ASTM D 4976.
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6.	Molding and testing according to ASTM D 4976.
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Recommended distributors for this material

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