



DOW™ HDPE DMDA-8007 HEALTH+™

The Dow Chemical Company - High Density Polyethylene Resin

Tuesday, November 5, 2019

General Information

Product Description

Dow HDPE DMDA-8007 HEALTH+™ is a narrow molecular weight distribution high density homopolymer designed to offer excellent stiffness, low warpage, good toughness, and good moldability. The resin is suitable for injection-molded medical devices such as IV kit components and respiratory care as well as caps and closures for pharmaceutical packaging.

Main Characteristics:

- Excellent stiffness
- Low warpage
- Good toughness
- High gloss parts

Complies with:

- U.S. FDA 21CFR 177.1520 (c) 2.2
- EU, No 10/2011
- Canadian HPFB, No Objection
- USP XXIII Class VI
- Drug Master File Listing

Consult the regulations for complete details.

General

Material Status	• Commercial: Active		
Availability	• North America		
Additive	• Antiblock: No	• Processing Aid: No	• Slip: No
Agency Ratings	• DMF Unspecified Rating • EU No 10/2011	• FDA 21 CFR 177.1520(c) 2.2 • HPFB (Canada) No Objection	• USP XXIII, Class VI ¹
Forms	• Pellets		
Processing Method	• Injection Molding		

ASTM & ISO Properties²

Physical	Nominal Value	Unit	Test Method
Density / Specific Gravity	0.967		ASTM D792
Melt Mass-Flow Rate			ASTM D1238
190°C/2.16 kg	8.3	g/10 min	
190°C/21.6 kg	180	g/10 min	
Environmental Stress-Cracking Resistance (ESCR)			ASTM D1693
122°F, 100% Igepal, F50	2.00	hr	
Mechanical	Nominal Value	Unit	Test Method
Tensile Strength (Yield)	4500	psi	ASTM D638
Tensile Strength (Break)	2600	psi	ASTM D638
Tensile Elongation (Yield)	6.0	%	ASTM D638
Tensile Elongation (Break)	350	%	ASTM D638
Flexural Modulus - 2% Secant	205000	psi	ASTM D790B
Impact	Nominal Value	Unit	Test Method
Tensile Impact Strength ³	80.0	ft-lb/in ²	ASTM D1822

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Hardness	Nominal Value	Unit	Test Method
Durometer Hardness (Shore D)	61		ASTM D2240
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load (66 psi, Unannealed)	183	°F	ASTM D648
Brittleness Temperature	< -105	°F	ASTM D746
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 These materials have been tested according to Dow's biocompatibility protocol, which is based on U.S.P. XXIII Class VI guidelines. (Test results relate to resins and not to finished products. Manufacturers of medical devices, equipment and packaging are responsible for determining the suitability of resins for their intended use.)

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

³ Type S