DOW™ HDPE DMDA-8920 HEALTH+™

The Dow Chemical Company - High Density Polyethylene Resin

Tuesday, November 5, 2019

General Information

Product Description

DOW HDPE DMDA-8920 HEALTH+™ Resin is a narrow molecular weight distribution high density copolymer designed to offer an excellent balance of toughness, environmental stress cracking resistance, and processability. The resin is suitable for injection-molded medical devices such as IV kit components and respiratory care. This product can also be used in pharmaceutical packaging including caps and closures.

Main Characteristics:

- Excellent toughness
- Excellent stress crack resistance
- Good processability
- High gloss parts

Complies with:

- U.S. FDA 21CFR 177.1520(c)3.1a
- USP XXIII Class VI
- EU, No 10/2011
- Canadian HPFB - No Objection
- 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 • FDA 21 CFR 177.1520(c) 3.1a	• HPFB (Canada) No Objection • USP 23	
Forms	• Pellets		
Processing Method	• Injection Molding		

ASTM & ISO Properties [1]

Physical	Nominal Value	Unit	Test Method
Density / Specific Gravity	0.956		ASTM D792
Melt Mass-Flow Rate (190°C/2.16 kg)	20	g/10 min	ASTM D1238
Environmental Stress-Cracking Resistance (ESCR)			ASTM D1693
122°F, 100% Igepal, F50	3.00	hr	
Mechanical	**Nominal Value**	**Unit**	**Test Method**
Tensile Strength (Yield)	4100	psi	ASTM D638
Tensile Strength (Break)	2000	psi	ASTM D638
Tensile Elongation (Yield)	7.0	%	ASTM D638
Tensile Elongation (Break)	250	%	ASTM D638
Flexural Modulus - 2% Secant	167000	psi	ASTM D790B
Impact	**Nominal Value**	**Unit**	**Test Method**
Tensile Impact Strength [2]	20.0	ft·lb/in²	ASTM D1822
Hardness	**Nominal Value**	**Unit**	**Test Method**
Durometer Hardness (Shore D)	57		ASTM D2240

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Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load (66 psi, Unannealed)	163	°F	ASTM D648
Brittleness Temperature	< -105	°F	ASTM D746
Vicat Softening Temperature	261	°F	ASTM D1525
Melting Temperature (DSC)	266	°F	Internal Method
Peak Crystallization Temperature (DSC)	243	°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