DOW™ HDPE DMDA-8904 HEALTH+™

The Dow Chemical Company - High Density Polyethylene Resin

Tuesday, November 5, 2019

General Information

Product Description

Dow HDPE DMDA-8904 HEALTH+™ is a narrow molecular weight distribution high density copolymer designed to offer excellent stiffness, environmental stress crack resistance, and good moldability. The resin is suitable for injection-molded medical devices such as IV kit components and respiratory care. Films can also be cast from this product yielding good barrier and stiffness.

Main Characteristics:

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

Complies with:

- U.S. FDA 21CFR 177.1520 (c) 3.2a
- 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) 3.2a • HPFB (Canada) No Objection	• USP XXIII, Class VI [1]
Forms	• Pellets		
Processing Method	• Injection Molding		

ASTM & ISO Properties [2]

Physical	Nominal Value	Unit	Test Method
Density / Specific Gravity	0.954		ASTM D792
Melt Mass-Flow Rate (190°C/2.16 kg)	4.4	g/10 min	ASTM D1238
Environmental Stress-Cracking Resistance (ESCR)			ASTM D1693
122°F, 100% Igepal, F50	22.0	hr	
Mechanical	**Nominal Value**	**Unit**	**Test Method**
Tensile Strength (Yield)	3900	psi	ASTM D638
Tensile Strength (Break)	4500	psi	ASTM D638
Tensile Elongation (Yield)	9.0	%	ASTM D638
Tensile Elongation (Break)	1200	%	ASTM D638
Flexural Modulus - 2% Secant	160000	psi	ASTM D790B
Impact	**Nominal Value**	**Unit**	**Test Method**
Tensile Impact Strength [3]	40.0	ft·lb/in²	ASTM D1822
Hardness	**Nominal Value**	**Unit**	**Test Method**
Durometer Hardness (Shore D)	59		ASTM D2240

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Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load (66 psi, Unannealed)	162	°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)	246	°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 biocompatibilty 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