



DOW™ HDPE DMDA-8904 HEALTH+™ High Density Polyethylene Resin

Overview

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.

Additive

- Antiblock: No
- Slip: No
- Processing Aid: No

Physical	Nominal Value (English)	Nominal Value (SI)	Test Method
Density	0.952 g/cm ³	0.952 g/cm ³	ASTM D792
Base Density ¹	0.952 g/cm ³	0.952 g/cm ³	Dow Method
Melt Index (190°C/2.16 kg)	4.4 g/10 min	4.4 g/10 min	ASTM D1238
Environmental Stress-Cracking Resistance (ESCR)			ASTM D1693
122°F (50°C), 100% Igepal, F50	22.0 hr	22.0 hr	
Mechanical	Nominal Value (English)	Nominal Value (SI)	Test Method
Tensile Strength			ASTM D638
Yield	3900 psi	26.9 MPa	
Break	4500 psi	31.0 MPa	
Tensile Elongation			ASTM D638
Yield	9.0 %	9.0 %	
Break	1200 %	1200 %	
Flexural Modulus - 2% Secant	160000 psi	1100 MPa	ASTM D790B
Impact	Nominal Value (English)	Nominal Value (SI)	Test Method
Tensile Impact Strength ²	40.0 ft-lb/in ²	84.1 kJ/m ²	ASTM D1822
Hardness	Nominal Value (English)	Nominal Value (SI)	Test Method
Durometer Hardness (Shore D)	59	59	ASTM D2240
Thermal	Nominal Value (English)	Nominal Value (SI)	Test Method
Deflection Temperature Under Load			ASTM D648
66 psi (0.45 MPa), Unannealed	162 °F	72.2 °C	
Brittleness Temperature	< -105 °F	< -76.1 °C	ASTM D746
Vicat Softening Temperature	264 °F	129 °C	ASTM D1525
Melting Temperature (DSC)	268 °F	131 °C	Dow Method
Peak Crystallization Temperature (DSC)	246 °F	119 °C	Dow Method

Additional Information

Plaque molded and tested in accordance with ASTM D4976.

Notes

These are typical properties only and are not to be construed as specifications. Users should confirm results by their own tests.

¹ Base density is estimated using the assumption that every 1000 ppm of antiblock in the finished product raises the density of the polymer by 0.0006 g/cm³. Base density is the estimated density of the polymer if it did not contain any antiblock.

² Type S

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Published: 2009-06-19

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