Technical Data Sheet

CONTINUUM™ DMDC-1250 NT 7 High Density Polyethylene Resin

Overview

CONTINUUM™ DMDC-1250 NT 7 High Density Polyethylene Resin (HDPE) is intended for use in both compression and injection molded closure applications including carbonated soft drink and hot fill closures. Its unique properties also make it suitable for living hinge closure applications. This resin has been designed to meet demanding performance requirements, especially in the areas of environmental stress crack resistance, stiffness, impact strength, and sensory, while maintaining good processing characteristics beneficial to molders.

Main Characteristics:

- Excellent ESCR, stiffness, and impact strength
- Excellent sensory properties
- Excellent processing characteristics

Complies with:

- U.S. FDA 21 CFR 177.1520(c)3.2a
- U.S. FDA-DMF
- Canadian HPFB No Objection
- Europe Commission Regulation (EU) No 10/2011

Consult the regulations for complete details.

Additive

- Antiblock: No
- Slip: No
- Processing aid: No

Properties

Physical	Nominal Value	Unit (English)	Nominal Value	Unit (SI)	Test Method
Density	0.955	g/cm³	0.955	g/cm³	ASTM D792
Base Density[1]	0.955	g/cm³	0.955	g/cm³	Dow Method
Melt Index (190°C/2.16 kg)	1.5	g/10 min	1.5	g/10 min	ASTM D1238
Environmental Stress-Cracking Resistance (ESCR)					ASTM D1693
122°F (50°C), 10% Igepal, F50	272	hr	272	hr	
122°F (50°C), 100% Igepal, F50	> 2000	hr	> 2000	hr	

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.

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

Properties (Cont.)

Mechanical	Nominal Value	Unit (English)	Nominal Value	Unit (SI)	Test Method
Tensile Strength					ASTM D638
Yield	4100	psi	28.3	MPa	
Break	3210	psi	22.1	MPa	
Tensile Elongation					ASTM D638
Yield	9.0	%	9.0	%	
Break	690	%	690	%	
Flexural Modulus - 2% Secant	160000	psi	1100	MPa	ASTM D790B
Hardness					
Durometer Hardness (Shore D)	60		60		ASTM D2240
Thermal					
Deflection Temperature Under Load					ASTM D648
66 psi (0.45 MPa), Unannealed	155	°F	68.3	°C	
Vicat Softening Temperature	261	°F	127	°C	ASTM D1525
Melting Temperature (DSC)	266	°F	130	°C	Dow Method
Peak Crystallization Temperature (DSC)	243	°F	117	°C	Dow Method
Additional Information					
Plaque molded and tested in accordance with ASTM D 4976.					

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c. use as a critical component in medical devices that support or sustain human life; or
d. use specifically by pregnant women or in applications designed specifically to promote or interfere with human reproduction.

Medical Applications Policy (Cont.)

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