

SureSpec HD50-10

High Density (HMW) Polyethylene

Genesis Polymers

Message:

HD50-10 is a High Molecular Weight polyethylene copolymer certified prime grade developed for blow molding and thermoforming of high performance large size industrial parts. HD50-10 features good processability, good melt strength and rigidity, excellent combination of low temperature Impact strength and chemical resistance. HD50-10 recommended processing temperature is 190 to 210°C. HD50-10 complies with FDA regulation 21CFR 177.1520(c) 3.1a + 3.2a (conditions of use B through H) and with most international regulations concerning the use of Polyethylene in contact with food articles.

General Information			
Features	High molecular weight		
	High density		
	Copolymer		
	Workability, good		
	Good melt strength		
	Low temperature impact resistance		
	Good chemical resistance		
	Compliance of Food Exposure		
	Medium hardness		
Uses	Industrial components		
Agency Ratings	FDA 21 CFR 177.1520(c) 3.1a & 3.2a, B through H		
Forms	Particle		
Processing Method	Blow molding		
	Thermoforming		
Physical	Nominal Value	Unit	Test Method
Density	0.948	g/cm ³	ASTM D1505
Melt Mass-Flow Rate (MFR) (190°C/2.16 kg)	< 0.10	g/10 min	ASTM D1238
Environmental Stress-Cracking Resistance (10% Igepal, F50)	> 600	hr	ASTM D1693B
Mechanical	Nominal Value	Unit	Test Method
Tensile Strength ¹ (Yield)	24.8	MPa	ASTM D638
Tensile Elongation ² (Break)	700	%	ASTM D638
Flexural Modulus	1210	MPa	ASTM D790
Impact	Nominal Value	Unit	Test Method
Tensile Impact Strength ³ (23°C)	252	kJ/m ²	ASTM D1822
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load (0.45 MPa, Unannealed)	78.0	°C	ASTM D648

Additional Information	Nominal Value	Unit
Processing Temperature	190 - 210	°C
Test Made on injection molded Type 1 tension test specimen according to ASTM D2146		
NOTE		
1.	50 mm/min	
2.	50 mm/min	
3.	50 mm/min	

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