

CERTENE™ HI-255

High Density Polyethylene
Muehlstein

Message:

HI-255 is a certified prime copolymer designed for molding industrial applications requiring excellent toughness and moderate stiffness. HI-255 features easy processability, superior Environmental Stress Cracking Resistance (ESCR), excellent impact strength, good dimensional stability and warpage resistance. HI-255 suggested applications include industrial containers and lids, 1 to 5 gallon pails, tote boxes, housewares, toys and structural foam. HI-255 recommended processing temperature is 230 to 270°C. with mold @ 20 to 40°C.. HI-255 complies with FDA regulation 21CFR 177.1520 (c) 3.2 (a) and with most international regulations concerning the use of Polyethylene in contact with food articles.

General Information			
Features	Good dimensional stability		
	Rigid, good		
	High ESCR (Stress Cracking Resistance)		
	Copolymer		
	Bending resistance		
	Workability, good		
	Good toughness		
	Compliance of Food Exposure		
Uses	Structural Foam		
	Cover		
	Industrial application		
	Household goods		
	Container		
Agency Ratings	FDA 21 CFR 177.1520(c) 3.2a		
Forms	Particle		
Processing Method	Injection molding		
Physical	Nominal Value	Unit	Test Method
Density	0.955	g/cm ³	ASTM D1505
Melt Mass-Flow Rate (MFR) (190°C/2.16 kg)	2.0	g/10 min	ASTM D1238
Environmental Stress-Cracking Resistance ¹ (50°C, 1.75 mm, 100% Igepal, Compression Molded, F50)	16.0	hr	ASTM D1693B
Mechanical	Nominal Value	Unit	Test Method
Tensile Strength ² (Yield, Compression Molded)	28.0	MPa	ASTM D638
Tensile Elongation ³ (Break, Compression Molded)	> 1000	%	ASTM D638
Flexural Modulus - 1% Secant ⁴ (Compression Molded)	1170	MPa	ASTM D790

Impact	Nominal Value	Unit	Test Method
Tensile Impact Strength	74.0	kJ/m ²	ASTM D1822
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load (0.45 MPa, Unannealed)	76.0	°C	ASTM D648
Brittleness Temperature	< -90.0	°C	ASTM D746
Vicat Softening Temperature	123	°C	ASTM D1525
Additional Information			
Test specimens from compression molded plaque according to ASTM D 1928 Procedure C.			
Injection	Nominal Value	Unit	
Processing (Melt) Temp	230 - 270	°C	
Mold Temperature	20.0 - 40.0	°C	
NOTE			
1.	Notched Bent Strip		
2.	50 mm/min		
3.	50 mm/min		
4.	1.3 mm/min		

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