

CERTENE™ HPB-0345

High Density Polyethylene
Muehlstein

Message:

HPB-0345 is a certified prime grade Phillips Process BLOW MOLDING copolymer designed to meet end-use requirements of containers for packaging of Household Industrial Chemicals (HIC). HPB-0345 features easy and consistent processability in conventional continuous or intermittent extrusion equipment. It also offers exceptional ESCR and Impact strength. Applications include containers for detergents, bleach, antifreeze, motor oil and agricultural chemicals. HPB-0345 recommended melt temperature is 180 to 200°C, with the mold at 10 to 20°C. HPB-0345 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	High ESCR (Stress Cracking Resistance)		
	High density		
	Copolymer		
	Impact resistance, high		
	Workability, good		
	Good chemical resistance		
	Detergent resistance		
	Compliance of Food Exposure		
Uses	Packaging		
	Industrial container		
	Container		
Agency Ratings	FDA 21 CFR 177.1520(c) 3.2a		
Forms	Particle		
Processing Method	Blow molding		
Physical	Nominal Value	Unit	Test Method
Density	0.945	g/cm ³	ASTM D1505
Melt Mass-Flow Rate (MFR) (190°C/2.16 kg)	0.35	g/10 min	ASTM D1238
Environmental Stress-Cracking Resistance (100% Igepal, Compression Molded, F50)	> 1000	hr	ASTM D1693B
Mechanical	Nominal Value	Unit	Test Method
Tensile Strength ¹ (Yield, Compression Molded)	24.1	MPa	ASTM D638
Tensile Elongation ² (Break, Compression Molded)	900	%	ASTM D638
Flexural Modulus - Tangent ³ (Compression Molded)	1040	MPa	ASTM D790A
Impact	Nominal Value	Unit	Test Method
Tensile Impact Strength (Compression Molded)	231	kJ/m ²	ASTM D1822

Thermal	Nominal Value	Unit	Test Method
Brittleness Temperature	< -75.0	°C	ASTM D746
Vicat Softening Temperature	121	°C	ASTM D1525

Additional Information

Test specimen was compression molded and was tested according to ASTM D1928 Procedure C.

Injection	Nominal Value	Unit
Mold Temperature	10.0 - 20.0	°C

Extrusion	Nominal Value	Unit
Melt Temperature	180 - 200	°C

NOTE

1. 50 mm/min
2. 50 mm/min
3. 1.3 mm/min

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