

CERTENE™ HPB-0354

High Density Polyethylene
Muehlstein

Message:

HPB-0354 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-0354 features medium swell, easy and consistent processability in conventional continuous or intermittent extrusion equipment, and excellent balance of bottle ESCR, Impact strength and Stiffness. Applications include medium size containers for detergents, bleach, antifreeze, motor oil and ice chests. HPB-0354 recommended processing temperature is 160 to 180°C., with mold at 10 to 30°C. HPB-0354 complies with FDA regulation 21CFR 177.1520 (c) 3.1 (a) + 3.2 (a) and with most international regulations concerning the use of Polyethylene in contact with food articles.

General Information			
Features	Rigidity, high		
	High ESCR (Stress Cracking Resistance)		
	High density		
	Copolymer		
	Impact resistance, high		
	Workability, good		
	Good chemical resistance		
	Detergent resistance		
Uses	Packaging		
	Industrial container		
Forms	Particle		
Processing Method	Blow molding		
Physical	Nominal Value	Unit	Test Method
Density	0.954	g/cm ³	ASTM D1505
Melt Mass-Flow Rate (MFR)			ASTM D1238
190°C/2.16 kg	0.35	g/10 min	ASTM D1238
190°C/21.6 kg	30	g/10 min	ASTM D1238
Environmental Stress-Cracking Resistance (50°C, 1.75 mm, 100% Igepal, Compression Molded, F50)	50.0	hr	ASTM D1693
Mechanical	Nominal Value	Unit	Test Method
Tensile Strength ¹ (Yield, Compression Molded)	26.9	MPa	ASTM D638
Tensile Elongation ² (Break, Compression Molded)	> 700	%	ASTM D638
Flexural Modulus - 1% Secant ³ (Compression Molded)	1340	MPa	ASTM D790
Impact	Nominal Value	Unit	Test Method
Tensile Impact Strength (Compression Molded)	206	kJ/m ²	ASTM D1822

Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load (0.45 MPa, Unannealed)	74.0	°C	ASTM D648
Brittleness Temperature	< -90.0	°C	ASTM D746
Vicat Softening Temperature	127	°C	ASTM D1525

Additional Information

This Specimen was compression molded and was tested according to ASTM D1928 Procedure C.

Injection	Nominal Value	Unit
Mold Temperature	10.0 - 30.0	°C
Extrusion	Nominal Value	Unit
Melt Temperature	160 - 180	°C

NOTE

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

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