CERTENE™ HGB-0457B

High Density Polyethylene

Muehlstein

Message:

HGB-0457B is a certified prime BLOW MOLDING and COMPRESSION copolymer developed for the production of high performance containers for general purpose and cap closure applications. HGB-0457B features BROAD-BIMODAL Molecular Weight Distribution that offers a unique combination of ESCR, Stiffness and Impact resistance at significant bottle weight reduction, and excellent processability in both continuous and intermittent equipments. HGB-0457B applications include small to medium-size containers for detergents, bleach chemicals, engine oil, antifreeze, toiletries, cosmetics and battle cap for carbonated soft drink. HGB-0457B recommended processing temperature is 150 to 170°C. with mold at 10 to 30°C. HGB-0457B conforms with FDA regulation 21CFR 177.1520 (c) 3.1(a) + 3.2(a) and most international regulations concerning polyethylene use in contact with food articles.

General Information	
Features	Rigidity, high High ESCR (Stress Cracking Resistance) Copolymer Impact resistance, good Workability, good Good chemical resistance Compliance of Food Exposure
Uses	Blown Containers Blow molding applications Container
Agency Ratings	FDA 21 CFR 177.1520(c) 3.1a FDA 21 CFR 177.1520(c) 3.2a
Forms	Particle
Processing Method	Blow molding Compression molding

Physical	Nominal Value	Unit	Test Method
Density	0.957	g/cm³	ASTM D1505
Melt Mass-Flow Rate (MFR) (190°C/2.16 kg)	0.40	g/10 min	ASTM D1238
Environmental Stress-Cracking Resistance [1] (50°C, 1.75 mm, 100% Igepal, Compression Molded, F50)	> 900	hr	ASTM D1693B
Volume density	0.560	g/l	
Blow Molding Mold Temperature	10 - 30	°C	
Blow Molding Temperature	150 - 170	°C	

Mechanical	Nominal Value	Unit	Test Method

Tensile Strength [2] (Yield, Compression Molded)	28.0	MPa	ASTM D638
Tensile Elongation [3] (Break, Compression Molded)	1100	%	ASTM D638
Flexural Modulus - 1% Secant [4] (Compression Molded)	1520	MPa	ASTM D790
Impact	**Nominal Value**	**Unit**	**Test Method**
Tensile Impact Strength (Compression Molded)	250	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	< -80.0	°C	ASTM D746
Vicat Softening Temperature	128	°C	ASTM D1525
Additional Information	**Nominal Value**	**Unit**	
Test specimens from compression molded plaque according to ASTM D 1928 Procedure C.			
NOTE			
1.	Notched Bent Strip		
2.	50 mm/min		
3.	50 mm/min		
4.	1.3 mm/min		

Recommended distributors for this material

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WECHAT