CERTENE™ HWB-1051

High Density (HMW) Polyethylene

Muehlstein

Message:

HWB-1051 is a certified prime grade Hexene copolymer High Molecular Weight developed for BLOW MOLDING of high performance medium to large size industrial containers. HWB-1051 features good processability, good melt strength, excellent combination of ESCR, high Impact strength, Stiffness, good Thermoform ability, and good chemical resistance. HWB-1051 applications include 20 to 55 gallon containers, chemical and gasoline tanks, carrying cases, automotive parts, tool boxes, truck-bed liners, and sheet, pipe and profile extrusion. HWB-1051 recommended processing temperature is 190 to 210°C.. HWB-1051 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	Copolymer
	Food Contact Acceptable
	Good Chemical Resistance
	Good Melt Strength
	Good Moldability
	Good Processability
	Good Stiffness
	Hexene Comonomer
	High ESCR (Stress Crack Resist.)
	High Impact Resistance
Uses	Automotive Applications
	Fuel Tanks
	Industrial Containers
	Liners
	Piping
	Profiles
	Sheet
	Tool/Tote Box
Agency Ratings	FDA 21 CFR 177.1520(c) 3.1a
	FDA 21 CFR 177.1520(c) 3.2a
Forms	Pellets
Processing Method	Blow Molding
	Thermoforming

Physical	Nominal Value	Unit	Test Method
Density	0.951	g/cm³	ASTM D1505
Melt Mass-Flow Rate (MFR)			ASTM D1238

190°C/2.16 kg	0.060	g/10 min	
190°C/21.6 kg	10	g/10 min	
Environmental Stress-Cracking Resistance			
Compression Molded, F50	> 1000	hr	ASTM D1693
50°C, 1.75 mm, 10% Igepal, Compression Molded, F50	150	hr	ASTM D1693B
Mechanical	**Nominal Value**	**Unit**	**Test Method**
Tensile Strength [1] (Yield, Compression Molded)	24.8	MPa	ASTM D638
Tensile Elongation [2] (Break, Compression Molded)	800	%	ASTM D638
Flexural Modulus - 1% Secant [3] (Compression Molded)	1070	MPa	ASTM D790
Impact	**Nominal Value**	**Unit**	**Test Method**
Tensile Impact Strength (Compression Molded)	347	kJ/m^2	ASTM D1822
Thermal	**Nominal Value**	**Unit**	**Test Method**
Deflection Temperature Under Load (1.8 MPa, Unannealed)	44.0	°C	ASTM D648
Brittleness Temperature	< -90.0	°C	ASTM D746
Vicat Softening Temperature	129	°C	ASTM D1525
Additional Information	**Nominal Value**	**Unit**	
Blow Molding Temperature	190 to 210	°C	
NOTE			
1.	50 mm/min		
2.	50 mm/min		
3.	1.3 mm/min		

Recommended distributors for this material

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