

KPOL-HDPE HD K-0.60/960

High Density Polyethylene

KPOL Chem Co.

Message:

High Density Polyethylene Homopolymer Extrusion-Blow Molding

Characteristics

The KPOL® resin meets the requirements of section 177.1520, paragraph C, from chapter 21 denominated "Olefin Polymers" from the Code of Federal Regulations of the FDA, to be utilized with direct food contact.

Applications

Blow Molded Small Volume: Dairy bottles, yogurt, liquid foods (milk, water, juice) packing and Toys.

General Information			
Additive	Antioxidant (250 to 500 ppm)		
Features	Antioxidant		
	Food Contact Acceptable		
	High Density		
	Homopolymer		
Uses	Beverage Containers		
	Blow Molding Applications		
	Bottles		
	Food Containers		
	Fruit Juice Bottles		
	Toys		
Agency Ratings	FDA 21 CFR 177.1520(c)		
Processing Method	Blow Molding		
	Extrusion		
Physical	Nominal Value	Unit	Test Method
Density	0.960	g/cm ³	ASTM D1505
Melt Mass-Flow Rate (MFR) (190°C/2.16 kg)	0.60	g/10 min	ASTM D1238
Environmental Stress-Cracking Resistance			
50°C, 3.18 mm, 100% Igepal CO-630, F50	12.0 to 18.0	hr	ASTM D1693A
50°C, 1.91 mm, 100% Igepal CO-630, F50	6.00 to 8.00	hr	ASTM D1693B
Hardness	Nominal Value	Unit	Test Method
Durometer Hardness (Shore D, 1 sec, 23°C)	50		ASTM D2240
Mechanical	Nominal Value	Unit	Test Method
Tensile Strength ¹ (Yield)	29.0	MPa	ASTM D638
Tensile Elongation ² (Break)	> 300	%	ASTM D638

Flexural Modulus - Tangent ³ (3.20 mm)	1650	MPa	ASTM D790B
Impact	Nominal Value	Unit	Test Method
Tensile Impact Strength	84.1	kJ/m ²	ASTM D1822
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load ⁴ (0.45 MPa, Unannealed)	75.0	°C	ASTM D648
Brittleness Temperature ⁵	< -58.0	°C	ASTM D746A
Vicat Softening Temperature	125	°C	ASTM D1525 ⁶
NOTE			
1.	Type IV, 50 mm/min		
2.	Type IV, 50 mm/min		
3.	13 mm/min		
4.	2°C/min		
5.	F50; 25 lbf/in		
6.	Rate A (50°C/h), Loading 1 (10 N)		

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