

KPOL-HDPE HD K-0.65/964

High Density Polyethylene

KPOL Chem Co.

Message:

High Density Polyethylene Homopolymer Extrusion-Blow Molding

Applications

Bottles for liquid foods (milk, water, juice) or powdered foods.

Characterisitics

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.

General Information			
Additive	Antioxidant (300 to 600 ppm)		
Features	Antioxidant		
	Food Contact Acceptable		
	High Density		
	Homopolymer		
Uses	Bottles		
Agency Ratings	FDA 21 CFR 177.1520		
Forms	Pellets		
Processing Method	Extrusion Blow Molding		
Physical	Nominal Value	Unit	Test Method
Density	0.964	g/cm ³	ASTM D1505
Melt Mass-Flow Rate (MFR) (190°C/2.16 kg)	0.65	g/10 min	ASTM D1238
Environmental Stress-Cracking Resistance ¹			
50°C, 3.18 mm, 100% Igepal CO-630, F50	15.0 to 20.0	hr	ASTM D1693A
50°C, 1.91 mm, 100% Igepal CO-630, F50	8.00 to 10.0	hr	ASTM D1693B
Hardness	Nominal Value	Unit	Test Method
Durometer Hardness (Shore D, 1 sec, 23°C)	65		ASTM D2240
Mechanical	Nominal Value	Unit	Test Method
Tensile Strength ² (Yield)	30.3	MPa	ASTM D638
Tensile Elongation ³ (Break)	> 300	%	ASTM D638
Flexural Modulus - Tangent ⁴ (3.20 mm)	1650	MPa	ASTM D790
Impact	Nominal Value	Unit	Test Method
Tensile Impact Strength	126	kJ/m ²	ASTM D1822
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load (0.45 MPa, Unannealed)	79.0	°C	ASTM D648

Brittleness Temperature ⁵	< -76.0	°C	ASTM D746A
Vicat Softening Temperature	130	°C	ASTM D1525 ⁶

NOTE			
1.	Grooved Specimen		
2.	Type IV, 50 mm/min		
3.	Type IV, 50 mm/min		
4.	13 mm/min		
5.	F50; 25 lbf/in		
6.	Rate A (50°C/h), Loading 1 (10 N)		

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