

KPOL-HDPE HD K-0.17/951

High Density Polyethylene

KPOL Chem Co.

Message:

High Density Polyethylene Copolymer HMW Extrusion-Blow Molding

Applications

Bottles for home use chemical liquid substances (bleache) and industrial chemicals (lubricants) up to 10 liters.

Bottles containing liquids for personal use (shampoo). Bottles for pharmaceutical products.

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.

General Information			
Additive	Antioxidant		
Features	Antioxidant		
	Copolymer		
	Food Contact Acceptable		
	High Density		
	High Molecular Weight		
Uses	Bottles		
Agency Ratings	FDA 21 CFR 177.1520		
Forms	Pellets		
Processing Method	Extrusion Blow Molding		
Physical	Nominal Value	Unit	Test Method
Density	0.951	g/cm ³	ASTM D1505
Melt Mass-Flow Rate (MFR)			ASTM D1238
190°C/2.16 kg	0.17	g/10 min	
190°C/21.6 kg	13	g/10 min	
Environmental Stress-Cracking Resistance			ASTM D1693B
60°C, 10% Igepal CO-630, F50 ¹	> 500	hr	
50°C, 1.90 mm, 100% Igepal CO-630, F50 ²	58.0	hr	
Hardness	Nominal Value	Unit	Test Method
Durometer Hardness (Shore D, 1 sec, 23°C)	68		ASTM D2240
Mechanical	Nominal Value	Unit	Test Method
Tensile Strength ³ (Yield)	27.6	MPa	ASTM D638
Tensile Elongation ⁴ (Break)	600	%	ASTM D638
Flexural Modulus - Tangent ⁵ (3.20 mm)	1380	MPa	ASTM D790
Impact	Nominal Value	Unit	Test Method
Notched Izod Impact (3.20 mm)	270	J/m	ASTM D256A
Tensile Impact Strength	242	kJ/m ²	ASTM D1822

Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load (0.45 MPa, Unannealed)	75.0	°C	ASTM D648
Brittleness Temperature ⁶	< -75.0	°C	ASTM D746A
Vicat Softening Temperature	125	°C	ASTM D1525 ⁷
Melting Temperature	129	°C	DSC

NOTE

- | | |
|----|---|
| 1. | 16 oz cylindrical bottle
(approximated mass of 20 g) filled
up to 33% of its capacity |
| 2. | Grooved Specimen |
| 3. | Type IV, 50 mm/min |
| 4. | Type IV, 50 mm/min |
| 5. | 13 mm/min |
| 6. | F50; 25 lbf/in |
| 7. | Rate A (50°C/h), Loading 1 (10 N) |

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Susheng Import & Export Trading Co.,Ltd.

Tel: +86 21 5895 8519

Phone: +86 13424755533

Email: sales@su-jiao.com

No. 215, Lianhe North Road, Fengxian District, Shanghai, China



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