

Exelene® HDPE 5502M

High Density Polyethylene

Montachem International, Inc.

Message:

Applications:

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

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

Characteristics:

The Exelene resin HDPE 5502M 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		
Uses	Bottles		
	Food Containers		
	Food Service Applications		
	Personal Care		
	Pharmaceuticals		
Agency Ratings	FDA 21 CFR 177.1520(c)		
Processing Method	Extrusion Blow Molding		
Physical	Nominal Value	Unit	Test Method
Specific Gravity	0.953	g/cm ³	ASTM D792
Melt Mass-Flow Rate (MFR)			ASTM D1238
190°C/2.16 kg	0.35	g/10 min	
190°C/21.6 kg ¹	30	g/10 min	
Environmental Stress-Cracking Resistance			
3.10 mm, F50	45.0	hr	ASTM D1693A
1.90 mm, F50	35.0	hr	ASTM D1693B
ESCR - In Standard Bottles by extrusion - blow molding	> 20.8	day	ASTM D2561
Hardness	Nominal Value	Unit	Test Method
Durometer Hardness (Shore D, 1 sec, 23°C)	67		ASTM D2240
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus - Tangent ² (3.20 mm)	1380	MPa	ASTM D638
Tensile Strength ³ (Yield)	27.6	MPa	ASTM D638
Tensile Elongation ⁴ (Break)	600	%	ASTM D638

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 ⁵ (0.45 MPa, Unannealed)	76.0	°C	ASTM D648
Brittleness Temperature ⁶	< -75.0	°C	ASTM D746A
Vicat Softening Temperature	127	°C	ASTM D1525 ⁷
Melting Temperature	129	°C	DSC
NOTE			
1.	HLMFI		
2.	13 mm/min		
3.	Type IV, 50 mm/min		
4.	Type IV, 50 mm/min		
5.	2°C/min		
6.	F50; 25 lbf*in		
7.	Rate A (50°C/h), Loading 1 (10 N)		

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