

Exelene® HDPE 54050M

High Density (HMW) Polyethylene

Montachem International, Inc.

Message:

Applications:

55 gallon plastic drums, chemical tanks for agriculture, automobile gasoline tanks.

Characteristics:

The Exelene resin HDPE 54050M 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			
Features	Copolymer		
	Food Contact Acceptable		
	High Density		
	High Molecular Weight		
Uses	Agricultural Applications		
	Automotive Applications		
	Drums		
	Food Service Applications		
	Fuel Tanks		
	Non-specific Food Applications		
Agency Ratings	FDA 21 CFR 177.1520(c)		
Processing Method	Extrusion Blow Molding		
Physical	Nominal Value	Unit	Test Method
Specific Gravity	0.954	g/cm³	ASTM D792
Melt Mass-Flow Rate (MFR) ¹ (190°C/21.6 kg)	5.5	g/10 min	ASTM D1238
Environmental Stress-Cracking Resistance			
50°C, 3.10 mm, 100% Igepal CO-630, F50	> 200	hr	ASTM D1693A
50°C, 1.90 mm, 100% Igepal CO-630, F50	> 200	hr	ASTM D1693B
Hardness	Nominal Value	Unit	Test Method
Durometer Hardness (Shore D, 1 sec, 23°C)	68		ASTM D2240
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus - Tangent ² (3.20 mm)	1310	MPa	ASTM D638
Tensile Strength ³ (Yield)	28.3	MPa	ASTM D638
Tensile Elongation ⁴ (Break)	600	%	ASTM D638
Impact	Nominal Value	Unit	Test Method
Notched Izod Impact (3.20 mm)	670	J/m	ASTM D256A

Tensile Impact Strength	189	kJ/m ²	ASTM D1822
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load ⁵ (0.45 MPa, Unannealed)	78.0	°C	ASTM D648
Brittleness Temperature ⁶	< -75.0	°C	ASTM D746A
Vicat Softening Temperature	126	°C	ASTM D1525 ⁷
Melting Temperature	263	°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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