

Alathon® M6580WC

High Density Polyethylene

LyondellBasell Industries

Technical Data

Product Description

ALATHON M 6580WC is a natural, high density, polyethylene homopolymer resin with a narrow molecular weight distribution formulated for use as primary insulation for coaxial and control cable applications including gas-injected or chemically expanded insulation. M 6580WC provides enhanced processability and stiffness, exhibits excellent color, low odor and good processing stability.

General

Material Status	• Commercial: Active		
Literature ¹	• Processing - Mold Shrink (English) • Processing - Polyolefin Injection Molding Guide (English) • Processing - Start-Up Guide (English)		
Search for UL Yellow Card	• LyondellBasell Industries • Alathon®		
Availability	• Asia Pacific • Europe	• North America • South America	
Features	• Good Processability • Good Processing Stability	• Good Stiffness • Homopolymer	• Low to No Odor • Narrow Molecular Weight Distribution
Uses	• Insulation	• Wire & Cable Applications	
Agency Ratings	• ASTM D 1248, III, Class A, Cat. 3, Grade E11		
Appearance	• Natural Color		
Forms	• Pellets		
Processing Method	• Extrusion		

Physical	Nominal Value Unit	Test Method
Density	0.965 g/cm ³	ASTM D1505
Melt Mass-Flow Rate (MFR) (190°C/2.16 kg)	8.2 g/10 min	ASTM D1238

Mechanical	Nominal Value Unit	Test Method
Tensile Strength		ASTM D638
Yield	28.3 MPa	
Break	22.8 MPa	
Tensile Elongation (Break)	1700 %	ASTM D638
Flexural Modulus - 1% Secant	1670 MPa	ASTM D790

Hardness	Nominal Value Unit	Test Method
Durometer Hardness (Shore D)	68	ASTM D2240

Thermal	Nominal Value Unit	Test Method
Brittleness Temperature	-76.0 °C	ASTM D746
Vicat Softening Temperature	130 °C	ASTM D1525

Electrical	Nominal Value Unit	Test Method
Volume Resistivity	3.0E+17 ohm·cm	ASTM D257
Dielectric Strength	28 kV/mm	ASTM D149
Dielectric Constant (1 MHz)	2.36	ASTM D150
Dissipation Factor		ASTM D150
1 MHz	0.000030	
2.00 GHz	0.000020	

Additional Information

The value listed as Dielectric Constant, ASTM D150, was tested in accordance with ASTM D1531.
The values listed as Dissipation Factor, ASTM D150, was tested in accordance with ASTM D1531.

Extrusion	Nominal Value Unit
Cylinder Zone 1 Temp.	149 to 163 °C
Cylinder Zone 2 Temp.	177 to 204 °C
Cylinder Zone 3 Temp.	204 to 232 °C