

SABIC® HDPE C0549

HIGH DENSITY POLYETHYLENE

DESCRIPTION

C0549 is a black High Density Polyethylene designed for Jacketing compound. This grade has excellent processability and physical properties as well as high Environmental stress crack resistance. 2.5% Carbon Black is added to ensure an outstanding weather and UV resistance.

TYPICAL APPLICATIONS

Bedding and Jacketing for medium and high voltage power and telecommunication cables.

Using sound commercial extrusion practices, HDPE C0549 normally meets the following cable product specifications:

IEC 60502, Type ST7

IEC 60708

TYPICAL PROPERTY VALUES

Revision 20230622

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
POLYMER PROPERTIES ⁽¹⁾			
Density			
Density (Base Resin)	948	kg/m ³	ASTM D1505
Density (Compound)	960	kg/m ³	ASTM D1505
Melt Flow Rate (MFR) ⁽¹⁾			
at 190°C and 5 kg ⁽¹⁾	1.8	g/10 min	ASTM D1238
Carbon black content	2.5	%	ISO 6964
MECHANICAL PROPERTIES ⁽¹⁾			
Tensile Strength at Yield ⁽²⁾	33	MPa	ASTM D638
Tensile Elongation at Break ⁽²⁾	1000	%	ASTM D638
Flexural Modulus	950	MPa	ISO 178/1A
ESCR (50°C, 10% Igepal), F0 ⁽²⁾	>5000	Hrs	ASTM D1693B
Hardness (Shore D)	61	-	ASTM D2240
THERMAL PROPERTIES			
Brittleness Temperature	<-90	°C	ASTM D746
ELECTRICAL PROPERTIES ⁽¹⁾			
Volume Resistivity @ 500V	7.3E15	Ω.cm	ASTM D257
Surface resistance	6.3E17	Ω	SABIC method
Dielectric Strength	33.3	kV/mm	ASTM D150

(1) Typical values; not to be construed as specification limits.

(2) Based on compression molded specimens

STORAGE AND HANDLING

HDPE resin should be stored in a manner to prevent a direct exposure to sunlight and/or heat. The storage area should also be dry and preferably do not exceed 50°C. SABIC would not give warranty to bad storage conditions, which may lead to quality deterioration such as color change and inadequate product performance. It is advisable to process HDPE resin within 6 months after delivery.



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