



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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