# PRODUCT DATA SHEET

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## Polyethylene

# LE6022

### Low Density Polyethylene Compound for Cable Jacketing

## Description

LE6022 is a black low density copolymer modified polyethylene compound.

It is characterized by excellent stress crack resistance and mechanical properties and low temperature performance in combination with good extrudability. LE6022 contains 2.5 % well dispersed furnace black in order to ensure excellent weathering resistance

## Typical characteristics

LE6022 can be described with following typical characteristics:

Excellent environmental stress cracking resistance (ESCR)
Low temperature performance
Excellent mechanical properties
Low flexural modulus

## Applications

LE6022 is intended for following applications:

Jackets for energy and communication cables

## Specifications

LE6022 is expected to meet the applicable requirements included in the below mentioned standards provided it is processed using sound material handling and processing practices as well as appropriate testing procedures.

ASTM D1248 Type I, Class C, Category 5, Grade E5, J3, W2-4
EN 50290-2-24
HD 620 S2 Part 1, table 4B, DMP 17
IEC 60502 Part 2, Type ST3
IEC 60708
IEC 60840 Type ST3

## Physical properties

| Property | Typical value * | Unit | Test method |
|---|---|---|---|
| Density | 931 | kg/m³ | ISO 1183-1 |
| Melt flow rate （190 °C/2.16 kg) | 0.2 | g/10min | ISO 1133-1 |
| Flexural modulus | >180 | MPa | ISO 178 |
| Base resin density | 918 | kg/m3 | ISO 1183-1 |
| Tensile strength （50 mm/min) | >15 | MPa | ISO 527-2 |
| Tensile strain at break （50 mm/min) | >600 | % | ISO 527-2 |
| Absorption coefficient [1] | ≥320 | - | ASTM D3349 |
| Brittleness temperature | <-76 | °C | ASTM D746 |
| Environmental stress crack resistance （50°C, Igepal 10%, F20) | >1000 | h | IEC 60811-406 |
| Hardness, Shore D [2] | 50 | - | ISO 868 |

* Data should not be used for specification work

[1] *Measured at 375 nm*
[2] *1 sec*

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## Electrical properties

| Property | Typical value * | Unit | Test method |
|---|---|---|---|
| DC volume resistivity | 10 | PΩcm | IEC 62631 |
| Dielectric strength | 20 | kV/mm | IEC 60243 |

* Data should not be used for specification work

## Processing techniques

LE6022 provides excellent surface finish and high output rates over a broad range of conditions. For normal extrusion equipments and applications we suggest a melt temperature and a conductor preheating according to the table below:

| Processing setting | Typical value/range |
|---|---|
| Melt temperature | 200 - 210 °C |

Specific recommendations for processing conditions can be determined only when the application and type of equipment are known. Please contact your Borealis representative for such particulars.

## Packaging and storage

Package: Bags, Octabins

LE6022 has a shelf life of 24 months from production date if stored in unopened original packages, under dry and clean conditions at temperatures between 10 - 30 °C (50 - 85 °F). Material shelf life is affected by the storage conditions and extreme conditions influence the general material quality and performance. It is also recommended to ensure proper stock rotation by First In – First Out principle.

## Product compliance documents

Latest versions of product safety information sheets (PSIS), product safety data sheets (SDS) and other product liability documents are available in our website www.borealisgroup.com.

## Sustainability aspects

Borealis is ever mindful of the impact of our products on the planet. We promote Design for Circularity (DfC) and Design for Recycling (DfR) to conserve natural resources and to reduce the environmental impact of products over their entire lifetime (including production, use phase and after phase). DfR helps ensure that material can be effectively recycled while maximizing the material performance efficiency. Further information on sustainability and Design for Recycling (DfR) can be found from our websites www.borealisgroup.com and www.borealiseverminds.com.

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