



SABIC® LDPE PCG09

LOW DENSITY POLYETHYLENE

DESCRIPTION

SABIC® LDPE grades for healthcare applications are produced under controlled conditions resulting in high product quality, consistency and a high level of purity.

SABIC® LDPE PCG09 is an additive free grade, typically designed for healthcare packaging and can typically be converted by Injection Molding and Cast Film to produce caps and closures, small bottles and secondary packaging.

Compliance to Regulations

SABIC® LDPE PCG09 complies with the relevant monographs of the European Pharmacopoeia (EP) and the United States Pharmacopoeia (USPVI).

TYPICAL PROPERTY VALUES

Revision 20180807

| PROPERTIES | TYPICAL VALUES | UNITS | TEST METHODS |
|---|----------------|-------------------|--------------|
| POLYMER PROPERTIES | | | |
| Melt Flow Rate (MFR) | | | |
| at 190 °C and 2.16 kg | 7.5 | dg/min | ISO 1133 |
| at 190 °C and 5 kg | 25 | dg/min | ISO 1133 |
| Melt volume rate (MVR) | | | |
| at 190 °C and 2.16 kg | 10 | ml/10 min | ISO 1133 |
| at 190 °C and 5 kg | 33 | ml/10 min | ISO 1133 |
| Density | 924 | kg/m ³ | ASTM D1505 |
| MECHANICAL PROPERTIES | | | |
| Tensile test ⁽¹⁾ | | | |
| tensile modulus | 170 | MPa | ISO 527/1A |
| stress at break | 10 | MPa | ISO 527/1A |
| strain at break | 100 | % | ISO 527/1A |
| stress at yield | 9 | MPa | ISO 527/1A |
| Izod impact notched | | | |
| at 23 °C | 50 | kJ/m ² | ISO 180/A |
| at -30 °C | 8 | kJ/m ² | ISO 180/A |
| Hardness Shore D | 41 | - | ISO 868 |
| THERMAL PROPERTIES | | | |
| Heat deflection temperature | | | |
| at 0.45 MPa (HDT/B) | 46 | °C | ISO 75-2 |
| Vicat Softening Temperature ^{(2) (3)} | | | |
| at 10 N (VST/A) | 93 | °C | ISO 306 |
| DSC test | | | |
| melting point | 110 | °C | DIN 53765 |
| enthalpy change | 138 | J/g | DIN 53765 |

(1) Speed of testing: 50 mm/min

(2) Based on injection moulded test specimens

(3) Conditioning of test specimen: temp. 23 °C, relative humidity 50 %, 24 hours



STORAGE AND HANDLING

Polyethylenes resins (in pelletised or powder form) should be stored in such a way that it prevents exposure to direct sunlight and/or heat, as this may lead to quality deterioration. The storage location should also be dry, dust free and the ambient temperature should not exceed 50 °C. Not complying with these precautionary measures can lead to a degradation of the product which can result in colour changes, bad smell and inadequate product performance. It is also advisable to process polyethylene resins (in pelletised or powder form) within 6 months after delivery, this because also excessive aging of polyethylene can lead to a deterioration in quality.

ENVIRONMENT AND RECYCLING

The environmental aspects of any packaging material do not only imply waste issues but have to be considered in relation with the use of natural resources, the preservations of foodstuffs, etc. SABIC considers polyethylene to be an environmentally efficient packaging material. Its low specific energy consumption and insignificant emissions to air and water designate polyethylene as the ecological alternative in comparison with the traditional packaging materials. Recycling of packaging materials is supported by SABIC whenever ecological and social benefits are achieved and where a social infrastructure for selective collecting and sorting of packaging is fostered. Whenever 'thermal' recycling of packaging (i.e. incineration with energy recovery) is carried out, polyethylene -with its fairly simple molecular structure and low amount of additives- is considered to be a trouble-free fuel.

DISCLAIMER

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