

SABIC® LLDPE 726QE

LINEAR LOW DENSITY POLYETHYLENE

DESCRIPTION

SABIC® LLDPE 726QE is a butene linear low density polyethylene resin. This grade gives blown films a relatively high stiffness for good machinability and a good overall balance of other performance properties, such as puncture resistance, impact strength and heat sealability. This material contains anti block, slip agent and processing aid.

Application

Typical applications for SABIC® LLDPE 726QE are shipping sacks, produce bags, can liners and carrier bags. SABIC® LLDPE 726QE has very good optical properties when blended with a LDPE (15-85%).

Film properties

Film of 50 µm and BUR=2 has been produced on Kiefel IBC with 130 kg/h. Die size 200 mm, die gap 0.8 mm.

This product is not intended for and must not be used in any pharmaceutical/medical applications.

TYPICAL PROPERTY VALUES

| PROPERTIES | TYPICAL VALUES | UNITS | TEST METHODS |
|------------------------------------|----------------|-------------------|--------------|
| POLYMER PROPERTIES | | | |
| Melt Flow Rate | | | |
| at 190 °C and 2.16 kg | 0.7 | dg/min | ISO 1133 |
| Density | 926 | kg/m ³ | ASTM D1505 |
| OPTICAL PROPERTIES | | | |
| Gloss (45°) | 65 | % | ASTM D2457 |
| Haze | 14 | % | ASTM D1003 |
| FILM PROPERTIES | | | |
| Impact strength | 23 | kJ/m | ASTM D4272 |
| Tear strength TD | 130 | kN/m | ISO 6383-2 |
| Tear strength MD | 23 | kN/m | ISO 6383-2 |
| Puncture resistance | 440 | J/m | SABIC method |
| Tensile test film | | | |
| Modulus of elasticity MD | 220 | MPa | ISO 527-3 |
| Yield stress MD | 13 | MPa | ISO 527-3 |
| Yield stress TD | 14 | MPa | ISO 527-3 |
| Modulus of elasticity TD | 240 | MPa | ISO 527-3 |
| Strain at break TD | 700 | % | ISO 527-3 |
| Stress at break TD | 27 | MPa | ISO 527-3 |
| Strain at break MD | 600 | % | ISO 527-3 |
| Stress at break MD | 34 | MPa | ISO 527-3 |
| Coefficient of friction | 0.1 | - | ASTM D1894 |
| Blocking | 10 | g | SABIC method |
| Re-blocking | <5 | g | SABIC method |
| THERMAL PROPERTIES | | | |
| Vicat Softening Temperature | | | |
| at 10 N (VST/A) | 110 | °C | ISO 306 |
| DSC test | | | |

| PROPERTIES | TYPICAL VALUES | UNITS | TEST METHODS |
|---------------|----------------|-------|--------------|
| melting point | 124 | °C | SABIC method |

QUALITY

SABIC is fully certified in accordance with the internationally accepted quality standard ISO 9001.

HEALTH, SAFETY AND FOOD CONTACT REGULATIONS

Detailed information is provided in the relevant Material Safety Datasheet and or Standard Food Declaration, available on the Internet (www.SABIC.com). Additional specific information can be requested via your local Sales Office.

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.