

# SABIC® LDPE PCG22

## 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 PCG22 is an additive free grade, typically designed for healthcare packaging and can typically be converted by Injection Molding to produce caps and closures. It exhibits a high MFR for good flow properties.

Compliance to Regulations

SABIC® LDPE PCG22 complies with the relevant monographs of the European Pharmacopoeia (EP) and the United States Pharmacopoeia (USPVI).

### TYPICAL PROPERTY VALUES

Revision 20220719

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
<b>POLYMER PROPERTIES</b>			
<b>Melt Flow Rate (MFR)</b>			
at 190 °C and 5 kg	75	dg/min	ISO 1133
at 190 °C and 2.16 kg	22	dg/min	ISO 1133
<b>Melt volume rate (MVR)</b>			
at 190 °C and 5 kg	98	ml/10 min	ISO 1133
at 190 °C and 2.16 kg	29	ml/10 min	ISO 1133
<b>Density</b>	919	kg/m <sup>3</sup>	ASTM D1505
<b>MECHANICAL PROPERTIES</b>			
<b>Tensile test</b> <sup>(1) (2)</sup>			
strain at break	400	%	ISO 527-2
stress at yield	8	MPa	ISO 527-2
stress at break	7	MPa	ISO 527-2
tensile modulus	175	MPa	ISO 527-2
<b>Creep modulus</b> <sup>(3) (4)</sup>			
after 1 hour	80	MPa	ISO 899
after 1000 hours	45	MPa	ISO 899
<b>Izod impact notched</b>			
at 23 °C	42	kJ/m <sup>2</sup>	ISO 180/A
at -30 °C	5.0	kJ/m <sup>2</sup>	ISO 180/A
<b>Hardness Shore D</b>	45	-	ISO 868
<b>THERMAL PROPERTIES</b>			
<b>Heat deflection temperature</b> <sup>(5)</sup>			
at 0.45 MPa (HDT/B)	39	°C	ISO 75-2
<b>Vicat Softening Temperature</b>			
at 10 N (VST/A)	82	°C	ISO 306
<b>DSC test</b>			
enthalpy change	104	J/g	DIN 53765
melting point	105	°C	DIN 53765

- (1) Test specimen according to ISO 527-2 type 1BA, thickness 2 mm
- (2) Speed of testing: 50 mm/min
- (3) Determined at 23 °C, 3 MPa
- (4) Test specimen according to ISO 3167, thickness 4 mm
- (5) Conditioning of test specimen: temp. 23 °C, relative humidity 50 %, 24 hours

## 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.

## 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.

## DISCLAIMER

Any sale by SABIC, its subsidiaries and affiliates (each a "seller"), is made exclusively under seller's standard conditions of sale (available upon request) unless agreed otherwise in writing and signed on behalf of the seller. While the information contained herein is given in good faith, SELLER MAKES NO WARRANTY, EXPRESS OR IMPLIED, INCLUDING MERCHANTABILITY AND NONINFRINGEMENT OF INTELLECTUAL PROPERTY, NOR ASSUMES ANY LIABILITY, DIRECT OR INDIRECT, WITH RESPECT TO THE PERFORMANCE, SUITABILITY OR FITNESS FOR INTENDED USE OR PURPOSE OF THESE PRODUCTS IN ANY APPLICATION. Each customer must determine the suitability of seller materials for the customer's particular use through appropriate testing and analysis. No statement by seller concerning a possible use of any product, service or design is intended, or should be construed, to grant any license under any patent or other intellectual property right.