

SABIC® LDPE PCG80

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 PCG80 is an additive-free grade produced using SABIC's proprietary high pressure Clean Tubular Reactor (CTR®) which typically ensures grades with high purity. It is typically used for semi-rigid containers obtained by Blow Fill Seal (BFS) process and medical films.

Compliance to Regulations

SABIC® LDPE PCG80 complies with the relevant monographs of the European Pharmacopoeia (EP) and the United States Pharmacopoeia (USPVI).

TYPICAL PROPERTY VALUES

Revision 20230331

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
POLYMER PROPERTIES			
Melt Flow Rate (MFR)			
at 190 °C and 2.16 kg	0.33	dg/min	ISO 1133
Density	922	kg/m ³	ASTM D 1505
OPTICAL PROPERTIES			
Gloss (45°)	57	%	ASTM D2457
Haze	8	%	ASTM D1003
FILM PROPERTIES			
Impact strength	30	kJ/m	ASTM D4272
Tear strength TD	40	kN/m	ISO 6383-2
Tear strength MD	35	kN/m	ISO 6383-2
Tensile test film			
Stress at break TD	22	MPa	ISO 527-3
Yield stress TD	11	MPa	ISO 527-3
Modulus of elasticity TD	190	MPa	ISO 527-3
Stress at break MD	27	MPa	ISO 527-3
Tensile test film			
Strain at break MD	>200	%	ISO 527-3
Strain at break TD	>500	%	ISO 527-3
Coefficient of friction	1.0	-	ASTM D1894
Blocking	30	g	SABIC method
Re-blocking	10	g	SABIC method
THERMAL PROPERTIES			
Vicat Softening Temperature			
at 10 N (VST/A)	98	°C	ISO 306
DSC test			
melting point	108	°C	DIN 53765

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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