

# SABIC® LDPE PCG01

## 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 PCG01 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 PCG01 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
<b>POLYMER PROPERTIES</b>			
<b>Melt Flow Rate (MFR)</b>			
at 190 °C and 2.16 kg	0.75	dg/min	ISO 1133
<b>Density</b>	925	kg/m <sup>3</sup>	ASTM D1505
<b>OPTICAL PROPERTIES</b>			
<b>Gloss (45°)</b>	55	%	ASTM D2457
<b>Haze</b>	10	%	ASTM D1003
<b>FILM PROPERTIES</b>			
<b>Impact strength</b>	15	kJ/m	ASTM D4272
<b>Tear strength TD</b>	45	kN/m	ISO 6383-2
<b>Tear strength MD</b>	45	kN/m	ISO 6383-2
<b>Tensile test film</b>			
Modulus of elasticity TD	200	MPa	ISO 527-3
Yield stress TD	12	MPa	ISO 527-3
Stress at break TD	20	MPa	ISO 527-3
Stress at break MD	25	MPa	ISO 527-3
<b>Tensile test film</b>			
Strain at break TD	>500	%	ISO 527-3
Strain at break MD	>200	%	ISO 527-3
<b>Coefficient of friction</b>	0.9	-	ASTM D1894
<b>Blocking</b>	20	g	SABIC method
<b>Re-blocking</b>	<5	g	SABIC method
<b>THERMAL PROPERTIES</b>			
<b>Vicat Softening Temperature</b>			
at 10 N (VST/A)	98	°C	ISO 306
<b>DSC test</b>			
melting point	113	°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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