

# SABIC® PP PCGR45

POLYPROPYLENE RANDOM COPOLYMER FOR INJECTION MOLDING

## DESCRIPTION

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

SABIC® PP PCGR45 is a highly transparent polypropylene random copolymer with good antistatic properties. This grade combines improved aesthetics of the finished articles with low temperature processability and good organoleptic performance. Part aesthetics are not affected by the lower temperatures, providing for a broader operating window, enabling short cycle times. SABIC® PP PCGR45 results in excellent demoulding characteristics and has a good stiffness to impact ratio.

## TYPICAL APPLICATIONS

SABIC® PP PCGR45 is typically used for injection moulding of housings for disposable 3-part syringes. Other applications demanding a high level of transparency and broad processing window are also possible. Compliance to regulations: SABIC® PP PCGR45 complies with the food contact regulations and the relevant monographs of the US & EP Pharmacopoeia.

## TYPICAL PROPERTY VALUES

Revision 20241029

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
<b>POLYMER PROPERTIES <sup>(1)</sup></b>			
<b>Melt Flow Rate (MFR)</b>			
at 230 °C and 2.16kg	45	g/10 min	ASTM D1238
<b>Density</b>			
at 23 °C	905	kg/m <sup>3</sup>	ASTM D792
<b>MECHANICAL PROPERTIES <sup>(2)</sup></b>			
<b>Tensile Properties</b>			
Strength @ Yield	28	MPa	ASTM D638
Elongation @ Yield	13	%	ASTM D638
<b>Flexural Modulus (1% Secant) <sup>(2)</sup></b>	1150	MPa	ASTM D790 A
<b>Izod Impact Strength</b>			
notched, at 23 °C	56	J/m	ASTM D256
<b>Rockwell Hardness, R-Scale</b>	85	-	ASTM D785
<b>THERMAL PROPERTIES</b>			
<b>Vicat Softening Temperature</b>	124	°C	ASTM D1525
<b>Heat deflection temperature</b>			
at 455kPa	71	°C	ASTM D648

(1) Typical values, not to be construed as specific limits

(2) Based on injection molded specimens

## PROCESSING CONDITIONS

Typical processing conditions for PCGR45 are:

Barrel temperature range: 185 - 225°C.

Mold Shrinkage: 1.2 - 2.0% depending on wall thickness and processing conditions.

Mold Temperature: Normally in the range of 25 - 40°C.



## STORAGE AND HANDLING

Polypropylene resin should be stored in a manner to prevent a direct exposure to sunlight and/or heat. The storage area should also be dry and preferably do not exceed 50°C. SABIC would not give warranty to bad storage conditions which may lead to quality deterioration such as color change, bad smell and inadequate product performance. It is advisable to process PP resin within 6 months after delivery.

## 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.