

SABIC® PP 5231P

POLYPROPYLENE HOMOPOLYMER

DESCRIPTION

SABIC® PP 5231P is a polypropylene homopolymer resin for the extrusion of biaxially oriented film. Films made from this resin exhibit excellent optical, mechanical and moisture barrier properties. This product is suitable for metallization.

TYPICAL APPLICATIONS

SABIC® PP 5231P can be used to produce plain & metallizable coextruded BOPP film. Used as base material for plain film used in stationary, food bags, synthetic paper and heat sealable barrier packaging film.

This product is not intended for use in medical and pharmaceutical applications.

TYPICAL PROPERTY VALUES

Revision 20230421

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
POLYMER PROPERTIES			
Melt Flow Rate (MFR)			
@ 230°C/2.16 kg	3.0	g/10 min	ASTM D1238
Density	905	kg/m³	ASTM D792
MECHANICAL PROPERTIES ⁽¹⁾			
Tensile Properties			
Tensile Strength at Yield ⁽²⁾	32	MPa	ASTM D638
Tensile Elongation at Yield ⁽²⁾	9	%	ASTM D638
Tensile Strength at Break ⁽²⁾	19	MPa	ASTM D638
Tensile Elongation at Break	165	%	ASTM D638
Flexural Modulus	1265	MPa	ASTM D790
Flexural Strength	35	MPa	ASTM D790
Izod impact notched at 23 °C	2.8	J/m	ASTM D256
Rockwell Hardness, R-Scale	98	-	ASTM D785
OPTICAL PROPERTIES ⁽²⁾			
Haze	0.1	%	ASTM D1003
Gloss @ 45°	155	-	ASTM D2457
FILM PROPERTIES			
Tensile test film			
Tensile Strength at Break, MD	110	MPa	ASTM D882
Tensile Strength at Break, TD	215	MPa	ASTM D882
Tensile Elongation at Break, MD	85	%	ASTM D882
Tensile Elongation at Break, TD	15	%	ASTM D882
1% Secant Modulus, MD	2100	MPa	ASTM D882
1% Secant Modulus, TD	3850	MPa	ASTM D882
THERMAL PROPERTIES ⁽¹⁾			
Vicat Softening Temperature	153	°C	ASTM D1525

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

(2) Test specimen preparation method : Pursuant to ASTM D4101

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CHEMISTRY THAT MATTERS™



PROCESSING CONDITIONS

Typical processing conditions for 5231P are:

extrusion temperature : 190 – 250 °C

Recommended stretching temperature : 130 – 160 °C

Recommended stretching ratio MD / TD : 4-7 / 7-10

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.

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