

Synthos PS GP 545

General Purpose Polystyrene

Synthos S.A.

Message:

SYNTHOS PS GP 545 is general purpose polystyrene (GPPS) with excellent optical properties, gloss and increased heat resistance. It is a thermoplastic material designed for injection moulding, extrusion, thermoforming and blow extrusion. Product has a form of cylindrical granules of diameter 2.5 to 6 mm.

SYNTHOS PS GP 545 contains an external lubricant.

APPLICATION

Injection moulding is used to produce e.g. packaging for cosmetics, CD and DVD cases, vegetable boxes for refrigerators, shower enclosure panels.

Extrusion is used to produce sheets and plates that can be thermoformed to packaging for the food industry. Blow extrusion may be produce biaxially-oriented sheets (BOPS). For these types of processing are properties of SYNTHOS PS GP 545 usually modified by blending with the high-impact polystyrene (HIPS) and SBS copolymers. It is also used as a co-extrusion material in the extrusion of plates and sheets with a glossy surface.

The composition of the polymer meets the requirements of the Health and can therefore be used for the production of articles coming into contact with food.

General Information	
Additive	Lubricant
Features	Food Contact Acceptable
	General Purpose
	High Gloss
	Lubricated
	Medium Heat Resistance
Uses	Opticals
	Bi-axially Oriented Film
	Blending
	Cosmetic Packaging
	Food Packaging
	General Purpose
	Media Packaging
Appearance	Sheet
	Colorless
Forms	Granules
Processing Method	Coextrusion
	Extrusion
	Extrusion Blow Molding
	Injection Molding
	Thermoforming

Physical	Nominal Value	Unit	Test Method
Melt Mass-Flow Rate (MFR) (200°C/5.0 kg)	2.7 to 3.3	g/10 min	ISO 1133

Molding Shrinkage	0.20 to 0.50	%	Internal Method
Particle Size	2.50 to 6.00	mm	
Residual Styrene	0.020	%	Internal Method
Impact	Nominal Value	Unit	Test Method
Charpy Unnotched Impact Strength (23°C)	16	kJ/m ²	ISO 179/1eU
Thermal	Nominal Value	Unit	Test Method
Vicat Softening Temperature	89.0	°C	ISO 306/B50
Flammability	Nominal Value		Test Method
Flame Rating (1.60 mm)	HB		UL 94
Injection	Nominal Value	Unit	
Drying Temperature			
Desiccant Dryer	80.0	°C	
Hot Air Dryer	70.0	°C	
Drying Time			
Desiccant Dryer	1.0	hr	
Hot Air Dryer	2.0 to 4.0	hr	
Processing (Melt) Temp	180 to 260	°C	
Mold Temperature	10.0 to 60.0	°C	
Extrusion	Nominal Value	Unit	
Melt Temperature	200 to 240	°C	

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