

Synthos PS GP 171

General Purpose Polystyrene

Synthos S.A.

Message:

SYNTHOS PS GP 171 is general purpose polystyrene (GPPS) with excellent optical properties, gloss, high heat resistance and mechanical strength. It is a thermoplastic material designed for extrusion, thermoforming and injection moulding. Product has a form of cylindrical granules of diameter 2.5 to 6 mms.

APPLICATION

Injection moulding is used to produce parts with increased thermal and mechanical resistance. Extrusion is used to produce e.g. shower enclosures panels and biaxially-oriented sheets (BOPS). It is used in the production of lightweight sheets (XPS). It is suitable for blending with high-impact polystyrene (HIPS) and SBS copolymers to increase the thermal resistance of the product e.g. cups for hot drinks.

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	
Features	Food Contact Acceptable
	General Purpose
	High Gloss
	High Heat Resistance
	Opticals
Uses	Bi-axially Oriented Film
	Blending
	Cups
	General Purpose
	Sheet
Appearance	Colorless
Forms	Granules
Processing Method	Extrusion
	Injection Molding
	Thermoforming

Physical	Nominal Value	Unit	Test Method
Melt Mass-Flow Rate (MFR) (200°C/5.0 kg)	1.4 to 1.7	g/10 min	ISO 1133
Molding Shrinkage	0.20 to 0.50	%	Internal Method
Particle Size	2.50 to 6.00	mm	
Residual Styrene	0.035	%	Internal Method
Impact	Nominal Value	Unit	Test Method
Charpy Unnotched Impact Strength (23°C)	18	kJ/m²	ISO 179/1eU
Thermal	Nominal Value	Unit	Test Method
Vicat Softening Temperature	101	°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 280	°C
Mold Temperature	10.0 to 60.0	°C
Extrusion	Nominal Value	Unit
Melt Temperature	200 to 250	°C

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