

SYNTHOS PS GP 535

General Purpose Polystyrene – GPPS

Technical Data Sheet

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Edition: 1

Approved by: Product Manager - František Svoboda

Previous editions of this document have lost their validity.

CHARACTERISTICS

SYNTHOS PS GP 535 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.

GENERAL REQUIREMENTS

The product may contain small amounts of granulate finer than that mentioned above of irregular shapes. Presence of any mechanical impurities in the granulate is not allowed. SYNTHOS PS GP 535 is a colorless plastic.

TECHNICAL PARAMETERS AND PROCESSING CONDITIONS

Parameters	Unit	Typical value	Standard/ Method	Note
Melt mass-flow rate (MFR)	g/10 min	3.7 - 4.3	ISO 1133/H	200 °C; 5 kg
Charpy impact strength	kJ/m ²	11	ISO 179/1eU	23 °C
Vicat softening temperature	°C	97	ISO 306/B50	50 °C/h; 50 N
Residual styrene content	%	0.020	Internal	-
Flammability ¹⁾	Class	HB	UL 94	1,6 mm
Moulding shrinkage	%	0.2 – 0.5	Internal	-
Processing conditions				
Temperature/Time of drying ²⁾	°C/h	70 / 2 – 4	-	hot-air drier
	°C/h	80 / 1	-	drier with a molecular sieve
Injection moulding: Melt temperature	°C	180 – 260	-	-
Injection moulding: Mould temperature	°C	10 – 60	-	-
Extrusion: Melt temperature	°C	200 - 240	-	-

1) Tested in Electro-technical testing institute, Prague, Czech Republic.

2) For products with high quality of surface

Guaranteed values of relevant technical parameters of the product are each time agreed upon in the sales contract.

To each shipping lot/delivery a quality certificate including data on properties of the product determined during release control is issued. Scope of the testing which is covered by the quality certificate is each time agreed upon in the sales contract.

PACKAGING

Synthos Dwory 7 spółka z ograniczoną odpowiedzialnością S.K.A.

(dawniej „Synthos Dwory” Sp. z o.o.)

ul. Chemików 1, 32-600 Oświęcim, tel. +48 33 844 18 21...25, fax +48 33 842 42 18.

www.synthosgroup.com



SYNTHOS PS GP 535 is usually delivered in bulk in road-tankers or in polyethylene bags containing 25 ± 0.2 kg (net weight) of the product. Bags are placed on palettes and protected with polyethylene film. The product can also be delivered in cardboard box (an octabin) placed on a pallet of dimensions 1150 x 1150 mm.

Use of packaging of other type is also permitted provided that it was previously agreed upon in the sales-contract and the product is protected at least in the same way as in the previously mentioned packaging.

Each packaging bears the following information: manufacturer's name and address, product name and grade, net mass, lot number and labelling required by relevant regulations (if needed).

In case of product transported in bulk the above-mentioned information is given in the quality certificate as well as in the sales documents.

TRANSPORTATION

Packaging and transportation are not subject to regulations for hazardous materials transportation (ADR, RID).

SYNTHOS PS GP 535 in unit packaging should be transported with the use of covered means of transport and in accordance with in force regulations on road and rail transport of goods. Transport of SYNTHOS PS GP 535 in bags without pallets, for example placed in containers, is allowed provided that the bags are protected against tear and moving during transport.

Do not transport together with the organic solvents.

STORAGE

SYNTHOS PS GP 535 is to be stored in transportation packaging or in bulk in closed containers (silos). It is recommended to store the product in dry, well ventilated, covered warehouses; away from sources of heat, at the temperature not exceeding 35°C . SYNTHOS PS GP 535 must not be stored together with organic solvents.

SYNTHOS PS GP 535 in bags can also be stored outdoors. The outdoor storage does not have any impact on quality of stored material, but the quality of packaging (PE film) and cleanliness of the outer surface of the packaging is compromised. Hence, the manufacturer does not recommend storing the product outdoors. Material in octabin packaging may not be stored outdoors because this type of packaging is not resistant to weather conditions.

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 535 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.

This document is of an informative character. The information given herein is based on the present state of our knowledge and experience. Product should be transported, stored and used in accordance with valid regulations and good occupational hygiene practice.

Making use of the information as well as product application is beyond the producer control and determination of the safe conditions of use is the sole responsibility of a customer.

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The logo for Synthos PS features the word "synthos" in a bold, lowercase, blue sans-serif font. Below it, the letters "PS" are displayed in a larger, stylized font where the "P" and "S" are interconnected. The "P" is blue and the "S" is green, with a white vertical bar separating them.