

PS rolls

Caroform 5100

Product Datasheet

Caroform S STANDARD

Version 6 13/11/2018

Description

Caroform High Impact Polystyrene (HIPS) is a general-purpose opaque material that has a good balance of stiffness and toughness. It has very good impact strength and is an excellent all-purpose material. It is very easy to thermoform. The Caroform 5100 grade is our standard opaque grade for general-purpose applications.

Applications

Cosmetic, luxury and food packaging (Trays).

Key Features

Certification/Approvals

The following approvals are available
ISO 9001:2015 and BRC IoP standards
Food: 10/2011/EC
RoHS: European Regulation 2015/863/EC

Printing

Screen and flexographic printing.

Thermoforming

Excellent thermoforming ability.

Conversion

Gluing can be done with either hot-melt or solvent-based glue.
Guillotine cutting: Can be cut on traditional printing guillotine with double-edged blade. Can also be die cut.
Welding: Thermal, Ultrasonic, and Hot Gas.

Product Availability

Colour

Standard colours or customer matches.

Finish

Natural matt

Thickness

0.2 mm to 1.5 mm

Roll Size Specifications

Gauge	Width	
	Minimum	Maximum
0,2 mm 0.49	300 mm	740 mm
0,5 mm to 1.5 mm	300 mm	780 mm

Physical properties

Properties	Unit	Standard	Method	Value
Density [#]	g/cm ³	ISO 1183	-	1.06
Tensile Strength	MPa	ISO 527	50 mm/min	25
Elongation at Break	%	ISO 527	50 mm/min	50
Tensile Modulus	MPa	ISO 527	50 mm/min	1800
Flexural Strength	MPa	ISO 178	2 mm/min	42
Charpy Notched Impact Strength	kJ/m ²	ISO 179	1eA at 23°C	10
Vicat Softening Point	°C	ISO 306	B50/oil	90
Heat Distortion Temperature	°C	ISO 75	HDT/A 1.8MPa	82

[#]The density quoted should only be used as a guide. This value can change depending upon the type and quantity of pigments or additives used.

Available Options

External anti-block

Alternative Solutions

Alternative solutions available, for more technical applications (SHIPS, Pharma 5180...)

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Additional Information

Thermoforming

Very easy to thermoform. Typical forming temperatures are between 150 °C to 180 °C. Normally no predrying is required if the material is kept in dry conditions.

UV Resistance

In outdoor or strong UV light conditions, HIPS will discolour and become brittle in a matter of months. For UV resistance grades please refer to the relevant technical data sheet or contact the Sales Office.

Cleaning and Maintenance

Typical detergents and soaps dissolved in warm water can be used to effectively clean surface contamination from the surface.

Chemical Resistance

Chemical resistance is influenced by many factors, including concentration, temperature, exposure time and material stress. Therefore the data below should only be used as a guide.

Reagent	Chemical resistance	Reagent	Chemical resistance
Acetone	Poor	Chloroform	Poor
Acid – (Weak)	Very Good	Citric Acid Solution	Good
Acid – (Strong)	Poor	Common Salt	Excellent
Apple Juice	Very Good	Detergents	Good
Beef Fat	Very Good	Diary Products	Good
Butter	Good	Diesel	Poor
Base (Weak)	Excellent	Ethyl Alcohol	Good
Base (Strong)	Poor	Fertilisers	Good
Carrot Juice	Excellent	Petrol	Poor

Manufacturing Tolerances

The tolerances below should only be used as a general guide, as embossing and temperature can have an influence.

SHEET GAUGE	Up to 0.6 mm	0.61 to 1.5 mm
GAUGE	± 10%	± 6 %
WIDTH	± 3 mm	± 3 mm

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Carolex SAS

Carolex SAS | Zone Industrielle la Métairie | 49160 Longué-Jumelles | France
 Tél. : +33 2 41526182 | Fax : +33 2 41388085 | E-mail : sales@carolex.fr | www.carolex.fr
 S.A.S au capital 1 905 020 € | RCS Saumur B 319 814 752 00030 | SIRET 319 814 752 00030 | APE 2221Z | N° TVA FR02 319814752