

APET rolls

Caroclear BLS 30

Product Datasheet

Caroclear BLS 30

Version 6 15/01/2019

Description

Caroclear BLS30 Amorphous Polyethylene Terephthalate (APET) is a super clear polymer used extensively for the packaging industry. It has excellent clarity, coupled with the stiffness similar to Polycarbonate. Caroclear BLS 30 grade has been developed as a high quality film for non-food, blisters application. It is available with specific properties for FFS machines.

Applications

Blisters and trays for the packaging of non-food product.

Key Features

Certification/Approvals

The following approvals are available (depending on colour)
ISO 9001:2015 and BRC IoP standards
RoHS: European Regulation 2015/863/CE

Printing

It is not designed for printing. Please contact our sales department if printing is required.

Thermoforming

Good thermoforming ability, it can be processed on most equipment. This product can be provided with special properties for optimal processing on FFS equipment.

Conversion

Gluing can be done with either hot-melt or solvent-based glue.
Welding: Thermal, Ultrasonic.

Product Availability

Colour

Natural clear, standard colour range or customer matches

Finish

Natural gloss.

Thickness

0.20 mm to 1.25 mm.
1.50 mm

Roll Size Specifications

Gauge	Width	
	Minimum	Maximum
0.20 to 0.30 mm	300 mm	980 mm
0.31 to 0.60 mm	300 mm	1200 mm
0.61 mm to 1.25 mm	300 mm	1000 mm
1.5 mm	440 to 490 mm	585 to 1000 mm

Other dimension please liaise with the office.

Physical properties

Properties	Unit	Standard	Method	Value
Density	g/cm ³	ISO 1183	-	1.32
Izod (Notched) Impact Strength	kJ/m ²	ISO 180	1U at 23°C	4.2
Tensile Strength	MPa	ISO 527	50 mm/min	30
Elongation at Break	%	ISO 527	50 mm/min	300
Modulus of Elasticity	MPa	ISO 527	50 mm/min	2000
Vicat Softening Point	°C	ISO 306	A120/oil	80
Water Vapour Transmission Rate	g/m ² /24 h	ASTM	F1249	7
Permeability CO ₂	cm ³ .m m/24.m ² .atm	ASTM	D1434	49
Permeability O ₂	cm ³ .m m/24.m ² .atm	ASTM	D1434	10

Data from 250 micron film

Available Options

CC: Special grade for FFS line with reduced shrinkage

Anti block options: AA: no anti-block, AB: External, .EA, Internal, EB: Internal and external

Alternative Solutions

BLS 30 eco grade can be used for less demanding market from 0,25 up to 0,8 mm.

For top quality aspect, when a pure clarity is needed than we recommend our CST 10 grade.

For HF welding, we recommend our BLS 40 range.

Carolex SAS

Additional Information

General Description

PET is a thermoplastic polyester (not to be confused with unsaturated polyesters mainly used for composite structures: boats, car body parts...)

Polyester resins are extremely sensitive to humidity, and combined with high temperature conditions (> 70 °C), the polymer chains are broken down by hydrolysis.

They are different types available and a brief description of each is given below:

PET (also known as PETP and PETE)

PET can be found in two molecular states: - Amorphous (transparent with low heat resistance).
 - Crystallised (opaque with high heat resistance).

APET

Amorphous PET: Has excellent transparency due to the lack crystallisation. Ideally temperature conditions should be kept below 80 °C to prevent crystallisation.

CPET

The foil is sold amorphous but crystallises (due to the presence of a nucleating agent) in the mould while thermoforming, which can be very difficult to control. The crystallisation gives the product high temperature resistance and high stiffness.

GPET

This is a co-polyester (grafted with a second glycol) that has the advantage of being completely amorphous and never crystallises.

Thermoforming

To keep the clarity of APET, over heating the sheet must be avoided. Typical sheet temperature of 120 °C to 165 °C, for shortest time possible. Typical mould temperature is around 55 °C to 65 °C. Cold moulds will prevent the material from stretching uniformly.

Chemical Resistance

APET shows a good resistance to aqueous solutions of salts, acids and alkalis. It also has good resistance to most solvents, alcohols, fats and oils, although very limited resistance to ketones.

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 0.20 mm	0.21 to .40 mm	0.41 to 1.00 mm	1.01 to 1.25mm	1.50 mm
GAUGE	± 10 %	± 7 %	± 4 %	± 3 %	± 3 %
WIDTH	± 1 mm	± 1 mm	± 1 mm	± 1 mm	± 1 mm

Disclaimer The information contained in this leaflet is based on our present technical knowledge and experience. In view of the large number of factors that may influence the processing and use of our products, the information does not relieve the processors and manufacturers of the need to carry out their own tests and experiments. Our information does not constitute a legally binding assurance of product availability, of particular properties or of a suitability for a particular use. Patent rights that may exist must be duly observed.

Carolex SAS