

PETG rolls

Carolight MDLX60

Product Datasheet

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Description

Carolight MDLX60 is a super light expanded copolymer (PETG) specifically designed to be used extensively in the medical packaging industry. An easier grade to thermoform compared to APET as it is not susceptible to crystallisation. It gives excellent gain density versus PS, offering better physical properties, high speed thermoforming, and free cutting dust while being used in clean room area.

Carolight MDLX60 films have been developed for rigid trays medical devices and pharmaceutical packaging, medical kits. Made of ideal external skin layers of *Eastar* copolyester 6763 and core base of EASTALITE®, both materials from Eastman Chemical Company BV extruded on dedicated lines following ISO 9001:2015 and BRC IoP quality systems.

Applications

Blisters and trays for the packaging of medical devices (Catheters, Filters, injection devices...).

Key Features

Certification/Approvals

The following approvals are available on request:
ISO 9001:2015, BRC IoP
ISO 10993

Thermoforming

Excellent thermoforming ability at high speed with minimum risk of dust cutting.

Conversion

This product is designed to be sealed with a Tyvek lid. It can be sterilised with Gamma Ray, Plasma or Ethylene Oxide. It can be sealed on itself using Thermal, High Frequency and Ultrasonic sealing.

Product Availability

Colour

Opaque no colour.

Finish

Surface with thin gloss embossed effect.

Roll Size Specifications

Gauge	Width	
	Minimum	Maximum
0.8 - 1.5 mm	600 mm	730 mm

Physical properties

Properties	Unit	Standard	Value
Density	g/cm ³	ISO 1183	0.75
Tensile Strength	MPa	ASTM D882	13-18
Elongation at Break	%	ASTM D882	55-57
Modulus of Elasticity	MPa	ASTM D882	519-777

Test conducted on 0.80 mm film.

#The density quoted should only be used as a guide. This value can change depending upon processing condition.

Alternative Solutions

Our Medical range of product offers alternative solutions like Caroclear MDL 50 (APET grade) or Caroclear MDL 60 (PETG grade). For further information about the full range, please contact our Sales Department.

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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 copolyester (grafted with a second glycol) that has the advantage of being completely amorphous and never crystallises.

Thermoforming

Carolight MDLX60 is a material very easy to thermoform. Typical sheet temperature of 100 °C to 145 °C. Very good cutting properties allow reduction to minimum release of particulates. Ideal for clean room environment.

Manufacturing Tolerances

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

SHEET GAUGE	0.41 to 1.00 mm	1.01 to 1.20 mm
GAUGE	± 4 %	± 3 %
WIDTH	± 1 mm	± 1 mm

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