ViPrint™ clear Impact lens 70 Lpi

Version 2a
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Previously branded as:
CAROCLEAR IMPACT LENS

Description

Vitasheetgroup's Amorphous Polyethylene Terephthalate (APET) is a super clear polymer used extensively for the packaging industry. It has excellent clarity not matched by any other polymer, coupled with the stiffness similar to Polycarbonate.
The Viprint Clear impact lens 70 Lpi is lenticular sheet allowing 3 D, morphing or Flip effect. Vitasheetgroup's excellent lens positionning and consistency guarantee very good effect and processing.

Applications

Boxing, printing, promotion.

Key Features

Certification/Approvals

The following approvals are available (depending on colour) on request:
Toy: EN 71 part 3.
ROHS: European Legislation 2002/95/EC.

Printing

Screen printing and offset printing.

Conversion

Guillotine cutting: Can be cut on traditional printing guillotine with double-edged blade.
Welding: Different techniques can be used to weld film to ViPrint Clear(Thermal, Ultrasonic, "hot air").
Gluing: ViPrint Clear can be glued with PUR glue or hot melt.

Product Availability

Colour

Clear.

Finish

One side gloss optimised for printing, one side embossed at 70 lens per inch.

Thickness

0,49 mm.

Sheet Size Specifications

Gauge	Sheet sizes	
	Width	Length
0,49 mm	520/1200 mm	500/1200 mm

Note: Please ask sales department for lens position available depending on sheet size

Stock Service:

This product is available from stock on the following sizes :
510 mm x 710 mm, lens parallel to 510 mm
510 mm x 710 mm, lens parallel to 710 mm

Physical properties

Properties	Unit	Standard	Method	Value
Density	g/cm^3	ISO 1183	-	1.27
Izod (Unnotched) Impact Strength	kJ/m^2	ISO 180	1U at 23°C	50
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	F372	6
Permeability CO2	$cm^3.mm/24.m^2.atm$	ASTM	D1434	49
Permeability O2	$cm^3.mm/24.m^2.atm$	ASTM	D1434	10

The density value can change depending upon the type and quantity of pigments or additives used.

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 type 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 120 °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.

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

SHEET GAUGE	0.49 mm
GAUGE	± 10 microns
WIDTH	- 0 mm, + 1 mm
SHEET LENGTH	Up to 1200 mm
LENGTH	- 0 mm, + 1 mm

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