

MATERIAL SPECIFICATIONS

Transparent or coloured amorphous polyester that can be manufactured in thicknesses ranging from 0.15 to 1.5 mm and with 1450-mm widths, it is characterised by the fact that it is a material co-extruded in three layers. The external layers are typically PETG (always amorphous polyester), whereas the internal layer is APET. The material is indicated for manufactured that have to be welded or glued easily. Typical applications are sheets for boxes with a high degree of transparency and gloss. It can be used on existing thermoforming plants and can be bent with the normal techniques. It may crystallise (bleach and become dull) if heated at temperature higher than 120°C. It is suitable for food applications, with a good barrier against oxygen and gases and an excellent resistance to fats.

Technical specifications (250 micron film)	Trial method	Unit of measurement	Value
Specific weight	ASTM D 1505	g/cm^3	1.32
Gloss at 45°	ASTM D 2457		1.08
Transparency	ASTM D 1746	%	88
Elastic modulus	ASTM D 882	GPa	2.5
Resiliency: • a 23°C • a -29°C	ASTM D 1709		405 175
Moisture permeability	ASTM F 372	g/m^2*24h	6.0
Oygen permeability	ASTM D1434	$cm^3*mm/m^2*24h*atm$	5.1
CO ₂ permeability	ASTM D1434	$cm^3*mm/m^2*24h*atm$	28
film thermoforming temperature		°C	110
Thermoformed items' softening temperature		°C	70
Minimum use temperature of thermoformed items (*)		°C	-40 (*)
Forming: • thin films (< 0.6 mm) • heavy films (others)			GOOD FAIR
Suitability for cutting formed items			POOR
Sterilisation: • ETO • Gamma rays • Steam			YES YES NO
Thicknesses		mm	0.15 ÷ 1.5
Widths		mm	180-1450
Critical Surface Tension TCS (only for material to be printed)		Dyne/cm	Upside 38 Downside 34 Treated side 42
Tolerances: • On thicknesses: 1. 0.150<Thickness<0.200 2. Thickness >0.200 • On width		% mm	 ±8 ±5 ±1

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(*) Warning: the product become brittle at low temperatures. Please verify case by case the mechanical resistance of the thermoformed article, on the basis of the real application.

CO-EXTRUSION

COEXPAN Montonate has the possibility to co-extrude and also spread a coating that allows a product that is increasingly customised to the needs of the customer be supplied. The material can be supplied in various finishings (U, D, E, F, H, I, T, N) corresponding to a variety of surface specification performances.

THERMOFORMING

The material needs to be checked at time intervals and temperatures to prevent crystallisation (film bleaching). Excellent thermoforming is obtained at a (material) temperature of $115 \div 120^{\circ}\text{C}$. We recommend you to let a period (approx. one week) from the extrusion in order to guarantee that the material reaches a homogeneous temperature and complete relaxation. The usual precautions should be used to prevent an anomalous absorption of humidity that could make the thermoformed-manufactured articles dull.

PACKING

Maximum weight of the rolls = 1000 kg. Internal cardboard (plastic on request) core diameter = 76 or 152mm. Two labels identify each roll - one placed inside the core and one on the outside – and it is protected with polyethylene film. They are normally packed horizontally on recyclable foamed polyurethane cradles and without protruding off the pallet edges. Each pallet is identified with two labels and is protected with stretch PE. It is also possible to have customised packing on request.

STORAGE

The material must be stored in warehouses that protect it:

1. From the light
2. From temperatures below 8°C and above 30°C
3. From excessive ambient humidity, which must not exceed 70% RH
4. From pollution deriving from other substances stored in the proximity (e.g. foul-noxious odours)

The protective packing should be removed only in the moment the material is used.

If stored as recommended, the product can be used at least one year after the production date (printed on the label), except the TCS value (that is guaranteed only for 6 months). However, if used after three months from the production, the material should be examined before use to verify the suitability for the intended use.

Considering the sensitivity to the temperatures of the product, it's requested to keep the material in the room where it will be used at least 48hours before use.

ADDITIONAL INFORMATION

The product formulation complies with legislative requirements and recommendations of many countries in UE. In case specific legislative requirements are applicable, it is responsibility of the customer to inform Coexpan about such specific limitations.

The company however places its R & D department at your disposition for meeting any special customer needs.

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Date 19/06/2018

Technical Data Sheet MO54

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