

Bayblend® MTR

PC/ABS blend sheet



I Line
Innovative

Features:

- excellent fire behaviour
- high stiffness
- excellent thermoforming properties



Bayblend® MTR is a flame retardant PC-ABS blend sheet, developed for mass transportation on land in general and the Railway Interiors Industry in particular. It meets stringent regulations for fire behaviour, electrical safety and resistance to chemicals, hydrolysis and heat. **Bayblend® MTR** also has good impact strength in a wide temperature range (-30°C). The sheet has excellent thermoforming properties and is easy to machine. **Bayblend® MTR** is made to customer needs in several colours and with several textures.

Applications

Bayblend® MTR sheet is specially developed and suited to thermoform medium or large parts for:

- seats
- wall claddings
- ceilings and other interior parts in buses
- trains and metros

	Test Conditions	Typical Values ⁽¹⁾	Unit	Test Method
PHYSICAL				
Density		1300	kg/m ³	ISO 1183-1
Water absorption saturation	water at 23°C	0.5	%	ISO 62
Water absorption equilibrium	23°C, 50 % relative humidity	0.2	%	ISO 62
MECHANICAL				
Tensile modulus	1 mm/min	3950	MPa	ISO 527-1,-2
Yield stress	50 mm/min	63	MPa	ISO 527-1,-2
Yield strain	50 mm/min	4	%	ISO 527-1,-2
Nominal strain at break	50 mm/min	19	%	ISO 527-1,-2
Izod impact strength	23°C, notched	9	kJ/m ²	ISO 180-A
Izod impact strength	-30°C, notched	7	kJ/m ²	ISO 180-A
THERMAL				
Vicat softening temperature	50 N, 50°C/h	106	°C	ISO 306
Coefficient of linear thermal expansion	23 to 55°C	0.48	10 ⁻⁴ /K	ISO 11359-1,-2
Temperature of deflection under load	1.80 Mpa	94	°C	ISO 75-1,-2

⁽¹⁾ These values are measured on injection molded samples, and are not intended for specification purposes.

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Ideas, innovative, intelligent, interesting... Exolon Group i-line represents the next generation of quality products. This seal guarantees innovative and intelligent first-class solutions at all times for a multitude of requirements.

Fire rating (*)

Application domain	Standard	Country	Rating
E&E	UL 94 UL 94-5V UL 94-5V	US US US	V-0 (1.5 mm) 5VB (2.0 mm) 5VA (3.0 mm)
Docket 90 A	ASTM E 162: Flame spread index Is burning droplets		< 35 (1 - 4 mm, grey) no (1 - 4 mm, grey)
Docket 90 A	ASTM E 662: Ds 1.5' Ds 4.0'		< 100 (1 - 4 mm, grey) < 150 (1 - 4 mm, grey)

(*) fire certificates are limited in time, always check if the mentioned certificate is still valid

Availability

Bayblend® MTR is available with different surface patterns. Colour samples can be provided on request. All grades can be produced with UV protection for outdoor use.

Maximum production widths

Surface structure	extrusion width	thickness
C-texture	1.250 mm	2 – 5 mm
Smooth both sides	2.050 mm	2 – 5 mm

Machining

Bayblend® MTR sheet is easy to machine with everyday tools. Sawing, drilling, routing, shearing and punching can all be done. Always use sharp tools suited for machining plastics.

Thermoforming

Thorough pre-drying of **Bayblend® MTR** sheets is essential for all thermoforming techniques where the sheet temperature will rise above 160°C. The recommended procedure is to use an air circulating oven set at 82°C for 4 to 24 hours, depending on sheet thickness. **Bayblend® MTR** sheet can be vacuum-formed at temperatures of 175 – 205°C. Use temperature controlled (50 – 95°C) aluminium or steel moulds. A good release from the mould can be obtained by providing a draft angle of 4 to 6°.

Assembling

Parts made of **Bayblend® MTR** can be assembled with other plastics, metals and other materials by means of glueing, welding and several mechanical fastening techniques.

Painting and printing

Bayblend® MTR sheets can be painted or printed using various standard techniques. No preliminary surface treatment is necessary, except for cleaning. To avoid compromising the impact strength of **Bayblend® MTR** sheets, paints must be suitable for use on polycarbonate. Products can be obtained from several manufactures of inks and paints. Their instructions must be carefully followed.

Chemical resistance

Bayblend® MTR sheets have good resistance to highly concentrated mineral acids, many organic acids, oxidising and reducing agents, mineral and animal greases and oil, neutral and acid salt solutions, saturated aliphatic and cycloaliphatic hydrocarbons and alcohols (except methyl alcohol). They are partially soluble in aromatic hydrocarbons and soluble in many halogenated hydrocarbons (methylene chloride and ethylene di-chloride are good solvents). Strong alkaline substances such as ammonia and amines decompose it. **Bayblend® MTR** sheets will resist most detergent-based household cleaners.