Product data sheet, August 2021

Exoblend® MTX

PC/ABS blend sheet

I Line
Innovative

Features:

- excellent fire behaviour (EN 45545-2)
- high stiffness
- excellent thermoforming properties

Exoblend® MTX is a flame retardant PC-ABS blend sheet, developed for the Railway Interiors Industry. It meets the EN45545-2 regulations for fire behaviour, and also provides electrical safety and heat resistance..
Exoblend® MTX has good impact strength in a wide temperature range. The sheet has excellent thermoforming properties and is easy to machine. **Exoblend® MTX** is made to customer needs in several colours

Applications
Exoblend® MTX sheet is specially developed and suited to thermoform medium or large parts for:

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

	Test Conditions	Typical Values[1]	Unit	Test Method
PHYSICAL				
Density		1.35	g/cm³	ISO 1183-1
MECHANICAL				
Tensile modulus	1 mm/min	5400	MPa	ISO 527-1,-2
Yield stress	50 mm/min	68	MPa	ISO 527-1,-2
Yield strain	50 mm/min	3	%	ISO 527-1,-2
Nominal strain at break	50 mm/min	5	%	ISO 527-1,-2
Izod impact strength	23°C	43	kJ/m²	ISO 180-A
Izod notched impact strength	23°C	6	kJ/m²	ISO 180-A
THERMAL				
Vicat softening temperature	50 N, 120°C/h	99	°C	ISO 306
Temperature of deflection under load	1.80 Mpa	86	°C	ISO 75-1,-2

[1] This 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
Rail coaches	EN 45545-2	Europe	HL2 for R1, R2, R3, R6 and R24
ISO 5659-2, 50 kW/m²	ISO 5660-1, 50 kW/m² ISO 5658-2 International	International International Ds(4) < 300 (2 - 2.5 mm) VOF 4 < 600 (2 - 2.5 mm)	MARHE < 90 kW/m² (2 - 2.5 mm) CFE > 20 kW/m² (2 - 2.5 mm)
	EN 45545-2, A. C, 50 kW/m²	Europe	CIT after 4 & 8 min < 0.9 (2 - 2.5 mm)
	ISO 4589-2, Method A, 4 mm	International	Oxygen index 54
	ISO 11925-2	International	Flame spread < 150 mm within 60 s, no burning droplets (2 - 2.5 mm)

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

Availability

Exoblend® MTX is available with different surface patterns. Colour samples can be provided on request.

Maximum production widths

Surface structure	Extrusion width	Thickness
Smooth both sides	2,050 mm	2 – 4 mm
C-texture	1,250 mm	2 – 4 mm
T-texture	2,050 mm	2 - 4 mm

Machining

Exoblend® MTX 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 **Exoblend® MTX** 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. **Exoblend® MTX** 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 **Exoblend® MTX** can be assembled with other plastics, metals and other materials by means of glueing, welding and several mechanical fastening techniques.

Painting and printing

Exoblend® MTX 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 **Exoblend® MTX** 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

Exoblend® MTX 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. **Exoblend® MTX** sheets will resist most detergent-based household cleaners.

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