

Product data sheet, June 2022

Exoblend® TF PC/ABS blend sheet



Features:

- extreme impact strength in a broad temperature range
- good thermoforming properties



Exoblend® TF is a PC-ABS blend sheet, with high impact resistance down to -30 °C. The resin has been developed for the automotive industry – including commercial vehicles – and has been approved by several original equipment manufacturers. The material's specific properties make it suitable for both interior and exterior applications. **Exoblend® TF** combines high heat resistance and extreme impact strength in a wide temperature range (-30°C up to +100°C). The sheets can be thermoformed and are easy to machine. **Exoblend® TF** is available in several colours and with several textures.

Applications

Exoblend® TF is particularly suited to thermoform:

- motor hoods, fenders, bumpers and side panels for tractors, trucks, agriculture and construction machinery
- interior liners and covers for above mentioned vehicles and machinery
- transport and travel cases

	Test Conditions	Typical values ⁽¹⁾	Unit	Standard
PHYSICAL Density Water absorption saturation Water absorption equilibrium	water at 23°C 23°C, 50 % relative humidity	1130 0.7 0.2	kg/m³ % %	ISO 1183-1 ISO 62 ISO 62
MECHANICAL Tensile modulus Yield stress Yield strain Nominal strain at break Izod impact strength Izod impact strength Izod impact strength Izod impact strength	1 mm/min 50 mm/min 50 mm/min 23°C, unnotched -30°C, unnotched 23°C, notched -30°C, notched	2400 54 4.4 > 50 no break no break 45 35	MPa MPa % kJ/m ² kJ/m ² kJ/m ²	ISO 527-1,-2 ISO 527-1,-2 ISO 527-1,-2 ISO 527-1,-2 ISO 180-U ISO 180-U ISO 180-A ISO 180-A
THERMAL Vicat softening temperature Coefficient of linear thermal expansion Temperature of deflection under load Temperature of deflection under load	50 N, 50°C/h 23 to 55°C 1.80 Mpa 0.45 Mpa	118 0.8 102 122	℃ 10⁴/K ℃ ℃	ISO 306 ISO 11359-1,-2 ISO 75-1,-2 ISO 75-1,-2
ELECTRICAL Electrical strength Volume resistivity Surface resistivity Relative permitivity Relative permitivity Dissipation factor Dissipation factor	1 mm 100 Hz 1 MHz 100 Hz 1 MHz	35 1E14 1E16 3.1 3.0 30 85	kV/mm Ohm.cm Ohm - 10 ⁻⁴ 10 ⁻⁴	IEC 60243-1 IEC 60093 IEC 60093 IEC 60250 IEC 60250 IEC 60250 IEC 60250

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

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Fire rating

Application domain	Standard	Country	Rating
Road transport	Directive 95/28 ECC	Europe	pass (4 mm)

Long term service temperature

Max. service temperature in air	105 °C
Min. service temperature	–30 °C

Availability

Exoblend® TF is available in different surface patterns. Colour samples can be provided on request. All grades can be produced with UV protection for outside use.

Sizes

Surface stucture	max.extrusion	thickness
Т	2,050 mm	2 – 6 mm
Smooth both sides	2,050 mm	2 – 6 mm

Machining

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

Thermoforming

Thorough pre-drying of **Exoblend® TF** 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 110°C for 4 to 24 hours, depending on sheet thickness.

Exoblend® TF sheet can be vacuum-formed at temperatures of 180 – 190°C. Use temperature controlled (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® TF** can be assembled with other plastics, metals and other materials by means of glueing, weld-ing and several mechanical fastening techniques.

Painting and printing

Exoblend® TF sheets can be painted or printed with several standard techniques. No preliminary surface treatment is necessary, except for cleaning. To avoid compromising the impact strength of **Exoblend® TF** 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® TF 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 dichloride are good solvents). Strong alkaline substances such as ammonia and amines decompose it. **Exoblend® TF** sheets will resist most detergent-based household cleaners.



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