

Elyfoam® PET Curvtex composite panel



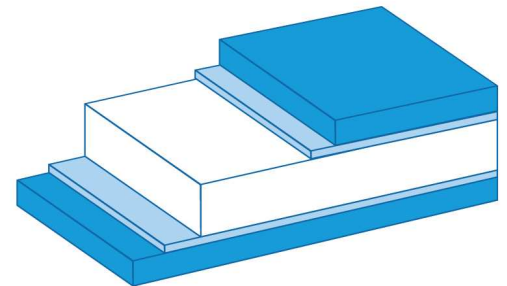
Technical datasheet

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Description

The Elyfoam® PET Curvtex panels are composed of Curvtex skins combined with a polyester foam (PET), joined together by adhesive bonding. The Curvtex skins are a consolidated material of 100% polypropylene (PP) self-reinforced material, combined with glass fiber.

These ultra light weight panels are designed to meet the highest performance characteristics in impact and abrasion resistance, in compression strength, and also provide a very high stiffness. Further, these panels are easy to process in a wide range of applications. The panels have been tested at temperatures as low as -30°C. Unlike typical polymer materials, the Curvtex material is known not to show any brittleness even at extremely low temperatures.



The Elyfoam® PET Curvtex panels are particularly suited for application in transport, packaging and temporary installations, as well as partitioning systems and doors.

Product range

Standard panels

Composition

- Polyester (PET) foam with a density of 100 kg/m³.
- Two Curvtex skins of 1.2 mm. The skins have a unique woven structure; they are a consolidated material of two 0.35 mm self-reinforced PP layers and of 0.5 mm glass fiber reinforced PP.
- Joined together by a high performance adhesion system.

Dimensions

Panel	Core	Skins	Colour (*)	1250 x 2400 mm	1250 x 2750 mm
12,4 mm	PET 100 kg/m ³ 10 mm	Curvtex 1.2 mm	Black or grey	●	●
17,4 mm	PET 100 kg/m ³ 15 mm	Curvtex 1.2 mm	Black or grey	●	●

(*) Black Curvtex skins are UV-resistant

On request

Other compositions are available on request.

Composition	Different core thickness
	Different core density

Dimensions (*)	Minimum	maximum	tolerances
Length (**)	400 mm	3000 mm	+/- 2 mm
Width	400 mm	1320 mm	+/- 2 mm
Thickness	9 mm	50 mm	+/- 0.4 mm

(*) Certain combinations might not be available

(**) A maximum length of up to 6000 mm is available upon special request

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Colors & surfaces	Other colours subject to minimum volume
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Technical characteristics

Weight, stiffness, compression & shear strength

Weight (kg/m²)	Elyfoam® PET Curvtex
12,4 mm	3.97
17,4 mm	4.47

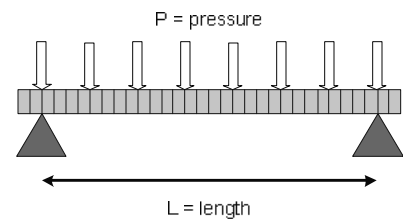
Bending stiffness E*I (Nm²/m)	Elyfoam® PET Curvtex
12,4 mm	601
17,4 mm	1262

Core Compression strength (MPa)	Elyfoam® PET Curvtex
PET 100 kg/m ³	1.8

Core Shear strength (MPa)	Elyfoam® PET Curvtex
PET 100 kg/m ³	0.8

Deflection

Deflection (mm) (*)	$L = 1000 \text{ mm}, W = 1000 \text{ mm}, P = 1000 \text{ N/m}^2$ ($F_{tot} = 100 \text{ kg}$)
12,4 mm	22.2
17,4 mm	10.7

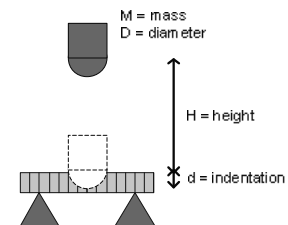


(*) calculated values including bending and shear stiffness.

Impact resistance

The Curvtex skins have an exceptionally high resistance to impact.

Impact resistance (mm)	$M = 2 \text{ kg}, H = 1000 \text{ mm}, \text{diameter} = 20 \text{ mm}$
Curvtex 1.2	0.71
1 mm aluminum (ref)	6.58



Fire behavior

Uncoated Curvtex skins correspond to Class B2 according DIN 4102 which is described as “normal flammability”.

PET foam 100 kg/m³ is classified as M4 / F1 in accordance with NF F16-101.

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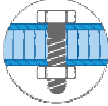


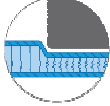


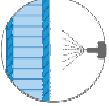
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Weather resistance

- Elyfoam® PET Curvtext panels are stable within a temperature range from -40 °C to +80 °C.
- Elyfoam® PET Curvtext panels are resistant to salt water, oil, fats and most other agents.
- Black Curvtext skins guarantee excellent UV-protection and don't show any significant signs of ageing compared to other similar polymer materials. Other color panels need to be provided with an additional UV protecting film when exposed to direct sunlight.
- Water absorption of the panels is minimal.

Processing guidelines

Please refer to Elytra's 'Processing Guidelines for Thermoplastic Composite Panels' for following panel processing topics:

 <i>Cutting</i>	 <i>Milling</i>	 <i>Drilling</i>	 <i>Fastening</i>	 <i>Adhesive bonding</i>
 <i>Bending</i>	 <i>Pressing</i>	 <i>Joining</i>	 <i>Edge finishing</i>	 <i>Surface finishing</i>

Or contact Elytra for any further information.

Storage

Elytra advises to protect the panels from rain, penetration of moisture and condensation during storage. Elyfoam® PET Curvtext composite panels can be stacked up to a height of 2 m.

These datasheet represent the current state of our technical knowledge. Its purpose it to inform our customers about the Elyfoam® PET Curvtext panels and their applications. The datasheets do not guarantee particular properties or suitability for a specific application. We reserve the right to make changes in accordance with technological advancements and other developments.

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