

### General Description

The XPS Foam is a polystyrene foam which is suitable for ultra-lightweight construction applications. The honeycomb structure provides more flexibility and is easy to handle.

The core is applicable with all known Epoxy and PU resin systems.

### Properties

- Closed-cell foam (no water absorption, no re-expansion, no outgassing)
- Ultra-light foam
- Easy processing with all known Epoxy and PU resin systems
- Not applicable with Styrene
- Homogenous connection of all components
- Excellent surface adhesion (connection between the surfaces and core)
- Highly consistent material properties
- Excellent thermal insulation
- Integrated flowing aid

### Application

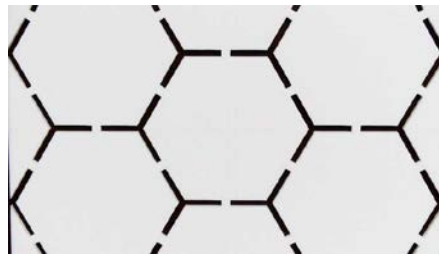
- **Ship and boat building:** hull, deck, interior
- **Industrial components:** sport equipment, furniture
- **Architecture and Construction:** roofs, walls, panels
- **Motorsport:** spoiler, bonnet, side elements

### Processing

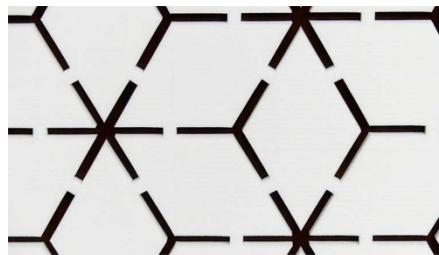
- Hand lay-up
- Vacuum Infusion
- Vacuum Assisted Light-RTM
- Bonding

### Structure Pattern

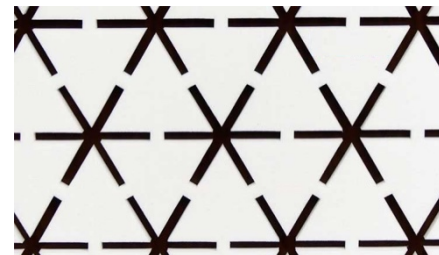
HX: Hexagon



RB: Rhombus



DT: Delta



### Resin uptake

**Surface:** 200g/m<sup>2</sup>/side

**Structure HX:** 75g/m<sup>2</sup>/mm

**Structure RB:** 126g/m<sup>2</sup>/mm

**Structure DT:** 171g/m<sup>2</sup>/mm

The resin uptake depends on the process as well. Please only use these formula as an indication value.

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Foam Type		XPS 45kg/m <sup>3</sup>		XPS 45kg/m <sup>3</sup>	XPS 45kg/m <sup>3</sup>
Structure Pattern		HX		RB	DT
Density		Kg/m <sup>3</sup>	Basic <sup>1</sup>	45	45
			Hybrid <sup>2</sup>	90	126
Shear Modulus	ASTM C 273	MPa	Basic <sup>1</sup>	15	15
			Hybrid <sup>2</sup>	31	45
Shear Strength	ASTM C 273	MPa	Basic <sup>1</sup>	0.43	0.43
			Hybrid <sup>2</sup>	0.8	1.1
Compression Modulus	ISO 844:2014	MPa	Basic <sup>1</sup>	30	30
			Hybrid <sup>2</sup>	98	149
Compression Strength	ISO 844:2014	MPa	Basic <sup>1</sup>	0.7	0.7
			Hybrid <sup>2</sup>	2.1	5.0
Thermal Conductivity	At 23 °C	W/mK	Basic <sup>1</sup>	0.07	0.07
Standard Sheets	Width	mm ± 5		405	405
	Length	mm ± 5		1015	1015
	Thickness	mm ± 0.3		3 - 29	3 - 29

**Remark:**

1: The values above are the actual values of the suppliers of the precursor material. We can't give a guarantee for the quality of the values and the related measurements. The properties of processing of the individual foam system are primarily evaluated knowing that the quality of the foam core is essential for the quality of the composite. The size of cavities and the properties have a major influence of the final part. Please regard that every part requires its own calculation of strength and component testing. Basic foam means foam without structure.

2: The values above are based on measurements on specimen of sandwich panels produced with an Epoxy system and Vacuum Injection technology. These values can differ depending on the manufacturing process. Please use the above values only as an indication for your analysis and please provide your own measurements. Specimen thickness of 20mm. Hybrid means foam core and structure filled with Epoxy resin.

## Disclaimer of Liability

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