HORIZON
Redefine Materials Frontier

HXCELL®

TECHNICAL DATA



HXCELL®-TX

HIGH-TEMPERATURE PVC FOAM CORE

HXCELL®-TX Series is a high-performance foam core specially designed for low- to medium-temperature prepreg and high-temperature infusion processes. Its modified Semi-IPN structure provides long-term temperature resistance of 130–160°C, while delivering high specific strength and high strain performance.

Its closed-cell cross-linked structure provides an exceptionally smooth surface, reducing the need for edge potting, sanding, and grinding typically required with conventional core materials. This helps shorten the lamination cycle and reduce labor costs.

MECHANICAL PROPERTIES

Property	Test Procedure	Unit	Statistical Value	TX I 60	TX I 80	TX I 100	TX II 80	TX II 100	TX II 130
Density	ISO 845	kg/m³	Max.	69	90	110	90	110	140
			Avg.	60	80	100	80	100	130
			Min.	54	72	90	72	90	120
Compressive Strength	ISO 844:2006	MPa	Avg.	1.03	1.51	2.16	1.51	2.16	3.10
			Min.	0.85	1.30	1.80	1.30	1.80	2.80
Compressive Modulus	ISO 844:2006	MPa	Avg.	90.8	119	180	119	180	206
			Min.	75.0	103	150	103	150	180
Tensile Strength	ASTM C297	MPa	Avg.	1.88	2.41	3.51	2.41	3.51	4.25
			Min.	1.70	2.20	3.00	2.20	3.00	3.50
Tensile Modulus	ASTM C297	MPa	Avg.	96	133	155	133	155	186
			Min.	87	110	130	110	130	150
Shear Strength	ISO 1922:2012	MPa	Avg.	0.79	1.15	1.57	1.15	1.57	2.18
			Min.	0.70	1.00	1.35	1.00	1.35	1.80
Shear Modulus	ISO 1922:2012	MPa	Avg.	23	32	42	32	42	54
			Min.	20	27	33	27	33	48
Shear Strain	ISO 1922:2012	%	Avg.	30	30	30	35	35	35

***Note:** The above values are average results obtained from routine production testing.

PRODUCT CHARACTERISTICS

- **SEMI-IPN STRUCTURE: High strength, stiffness, and impact resistance.**
- **EXCELLENT CHEMICAL RESISTANCE:** Compatible with a wide range of resin systems, including epoxy and unsaturated polyester resins.
- **CLOSED-CELL STRUCTURE:** Provides low resin absorption, low water absorption, thermal insulation, sound insulation, and dielectric transparency.
- **SELF-EXTINGUISHING PROPERTY:** Suitable for applications requiring enhanced fire safety and higher performance standards.
- **LONG-TERM TEMPERATURE RESISTANCE:** Suitable for prepreg and high-temperature infusion, up to 130–160°C.

TECHNICAL CHARACTERISTICS

Characteristics	Test Procedure	Unit	TX I 60	TX I 80	TX I 100	TX II 80	TX II 100	TX II 130	TX III 160
Thermal Conductivity (20°C)	EN 12667	W/(m-K)	0.028	0.029	0.031	0.035	0.036	0.037	0.040
Coefficient of Linear Thermal Expansion	ISO 4897	x10^-6/°C	40	40	40	40	40	40	40
Heat Deflection Temperature	DIN 53424	°C	125	125	125	125	125	125	130
Maximum Continuous Service Temperature	/	°C	80	80	80	80	80	80	80
Maximum Processing Temperature	/	°C	130	130	130	145	145	145	160
Dissipation Factor	ASTM D 2520	/	0.0003	0.0005	0.0006	0.0005	0.0006	0.0009	0.0012

***Note:** The above data are average values from routine production testing.

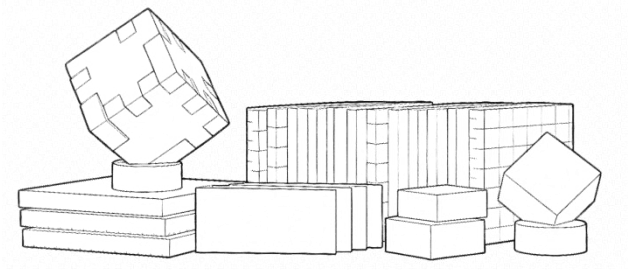
Continuous service temperature: -200°C to +80°C. For high-temperature or sustained load applications, please contact us for design support.

Maximum processing temperature depends on time, pressure and process conditions; recommended limit under normal conditions is 110°C.

HXCELL®- TX CERTIFICATIONS, APPROVALS & COMPLIANCE:

Disclaimer:

This data sheet may be subject to revision and changes due to development and changes of the material. The data is derived from tests and practical experience. If not stated as minimum values, the data is average data and should be treated as such. Relevant calculations should be verified by actual tests. The data is furnished without liability for the company and does not constitute any warranty or representation in respect of the material or its use. The company reserves the right to release new data sheets in replacement.



DONGYING HORIZON COMPOSITES CO., LTD.
Lightweight Materials Industrial Park, Hekou District,
Dongying, Shandong, China
E-MAIL: market@huixinherui.com
TEL: 0546-7719688