Marex



Product Data Sheet

MAREX PMI -F Series

MAREX PMI -F Series Foam Core

As the most commonly used high-performance PMI foam core material in the aerospace field, the MAREX PMI -F excels in high-temperature resistance. It is compatible with the high-temperature epoxy resin autoclave curing process, maintaining stability under extreme temperature. When combined with carbon fiber prepreg to produce sandwich structures, it achieves excellent interfacial bonding, ensuring performance.

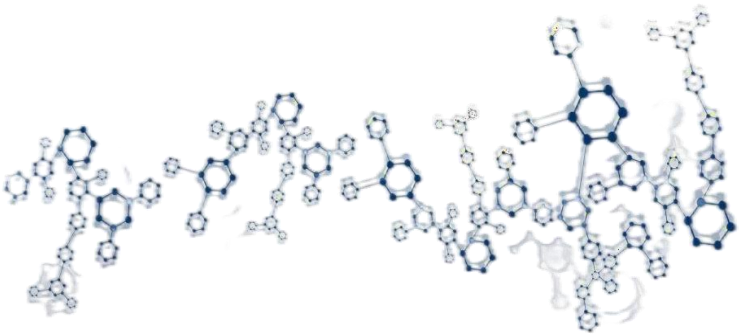
The high performance matrix material and the uniform and dense cell structure endow PMI foam with excellent structural stability and superior mechanical properties, making it the highest-performance core material at equivalent densities. It is widely used in aerospace, military radar, high-speed rail and urban rail transit, ships and yachts, automobile manufacturing, sports equipment, medical devices, audio and acoustic products, and other fields.

MAREX PMI -F Technical Data Sheet

Item	Standard	Unit	Value type	F32	F52	F75	F110
Density	ISO 845	kg/m³	Average	32	52	75	110
			Range	±7	±12	±15	±21
Compressive strength	ISO 844:2006	MPa	Average	0.43	1.03	1.84	3.31
Compressive modulus	ISO 844:2006	MPa	Average	12.5	42.4	76.3	118.6
Shear strength	ASTM C273:2012	MPa	Average	0.42	0.78	1.33	2.56
Shear modulus	ASTM C273:2012	MPa	Average	11.6	21.3	37.3	53.4
Tensile strength	ASTM D638	MPa	Average	1.11	1.86	2.73	4.08
Tensile modulus	ASTM D638	MPa	Average	36.4	69.6	114.6	148.7

MAREX PMI -F Characteristics

- 100% closed cell structure
- Excellent mechanical properties
- High-temperature resistance
- Compressive creep resistance
- High machinability



MAREX PMI -F Technical Characteristics

Item	Standard	Unit	F32	F52	F75	F110
Thermal conductivity	EN 12667	W/(m-K)	0.029	0.03	0.032	0.035
HDT	DIN 53424	°C	190	190	190	190
Dissipation factor	ASTM D 2520	/	0.0002	0.0003	0.0005	0.0007
Permittivity	ASTM D 2520	/	1.03	1.05	1.08	1.11

*Note: The above data are average results from various products, obtained from routine production testing.

For use under high temperature and continuous load conditions, please contact the technical service department for detailed design instructions.The maximum processing temperature depends on time, pressure, and process conditions. Therefore, it is recommended that the user contact the technical service department to confirm the specific processing parameters .

MAREX PMI -F Dimensions

Item		Unit	F32	F52	F75	F110
Block	Length	mm	2500	2500	2500	2200
	Width	mm	1250	1250	1250	1100
	Thickness	mm	120	105	90	80
Flexible panel	Length	mm	1250	1250	1250	1125
	Width	mm	1250	1250	1250	1150
	Thickness	mm	5-65	5-65	5-65	5-65
Rigid panel	Thickness	mm	1-120	1-105	1-90	1-80

*Note：The above data are based on the current measurement results of the existing products being produced. For the latest data, please contact the technical service department.

MAREX PMI -F Application Fields



Disclaimer:

This data sheet may be revised and modified due to material development and changes. These data are from testing,and if not represented as minimum value, the data is the average value. The data provided by the company is for reference only and the company does not assume any responsibility, nor does it constitute a guarantee or statement regarding the material or it's use. The company reserves the right to publish new version of data sheet.

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