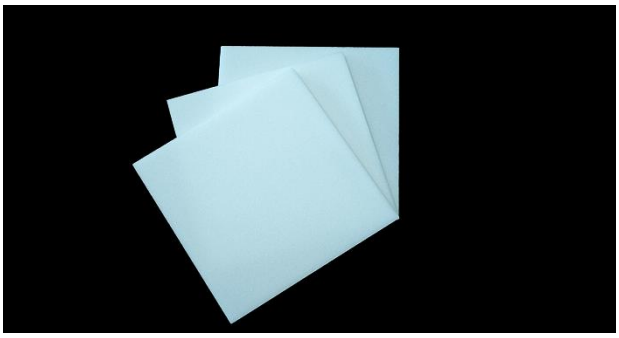
HORIZON
Redefine Materials Frontier

TEAMFOAM

TECHNICAL DATA SHEET



TEAMFOAM®-F

HIGH PERFORMANCE PMI FOAM CORE

TEAMFOAM®-F Series is a high-performance, closed-cell, cross-linked rigid PMI (polymethacrylimide) foam product available in a density range of 32 kg/m³ to 110 kg/m³. Its cross-linked network is complete and stable, completely avoiding internal structural damage caused by high-temperature and high-pressure molding processes. The TEAMFOAM®-F Series offers an exceptional HDT (heat deflection temperature) of 190°C, maintaining dimensional stability even under demanding medium-to-high temperature processing conditions.It is compatible with a variety of such as high-temperature autoclave, compression molding, vacuum infusion, and prepreg layup, and is highly compatible with various thermosetting resin systems. Moreover, it delivers outstanding specific stiffness, specific strength, and structural stability. Based on the above advantages, TEAMFOAM®-F is widely used in aerospace, unmanned aerial vehicles (UAVs), military radar, medical devices, high-speed rail and urban rail transit, automotive manufacturing, sports equipment, acoustic products, and other fields.

MECHANICAL PROPERTIES

Density /kg/m³	Type	Compressive Strength/MPa		Compressive Modulus/MPa		Tensile Strength/MPa		Tensile Modulus/MPa		Shear Strength/MPa		Shear Modulus/MPa	
		Min	Avg	Min	Avg	Min	Avg	Avg	Min	Avg	Min	Avg	Min
32±5	FCX32	0.35	0.45	23.00	31.20	0.75	0.95	41.60	42.80	0.40	0.60	12.50	15.80
	FX32	0.30	0.40	22.50	30.50	0.70	0.90	40.10	42.30	0.40	0.60	12.50	15.70
	FZ32	0.30	0.40	22.50	28.40	0.70	0.80	38.60	40.10	0.40	0.60	12.20	14.30
52±6	FCX52	0.90	1.10	63.00	78.60	1.10	1.20	87.30	108.20	0.68	0.77	21.00	28.20
	FX52	0.85	1.10	62.50	77.20	1.00	1.20	86.50	107.30	0.65	0.75	20.00	27.50
	FZ52	0.80	0.90	65.50	82.40	1.00	1.20	85.50	106.50	0.65	0.80	20.00	28.30
	FC52	0.80	0.90	63.50	81.30	0.90	1.10	83.00	104.70	0.62	0.74	21.50	28.60
75±8	FCX75	1.60	1.90	110.00	126.50	1.80	2.20	121.00	136.00	0.85	1.00	35.00	40.00
	FX75	1.50	1.90	108.50	125.80	1.80	2.10	120.00	135.00	0.80	1.00	35.00	40.00
	FZ75	1.50	1.80	105.50	124.70	1.60	2.00	122.50	132.00	0.80	0.90	34.50	39.50
	FC75	1.50	1.80	105.00	120.60	1.70	2.10	122.50	133.00	0.80	0.90	34.00	38.60
110±12	FCX110	2.70	3.20	177.00	209.80	3.20	3.60	192.00	215.00	2.00	2.40	54.00	62.00
	FX110	2.60	3.20	175.50	205.60	3.10	3.60	190.00	215.00	2.00	2.30	53.00	62.00
	FZ110	2.60	3.10	172.50	208.70	2.90	3.60	185.50	213.00	2.00	2.30	52.00	61.00
	FC100	2.60	3.20	170.00	202.90	2.90	3.60	188.00	210.00	1.90	2.20	52.50	61.50
200±25	FCX200	6.80	8.20	355.00	426.70	7.20	8.90	388.00	455.00	4.20	4.40	115.00	135.00
	FX200	6.80	8.20	350.00	418.60	7.20	8.90	385.00	455.00	4.10	4.40	114.00	134.00
	FZ200	6.70	8.10	345.50	425.30	7.10	8.80	380.00	452.00	4.20	4.40	110.50	128.00
	FC200	6.70	8.20	345.50	412.80	7.20	8.70	380.00	450.00	4.10	4.30	110.50	131.00

PRODUCT CHARACTERISTICS

●100% CLOSED-CELL STRUCTURE:

Uniform and dense closed-cell architecture prevents moisture ingress and ensures long-term performance stability in demanding environments.

PRODUCT CHARACTERISTICS

●EXCELLENT CREEP & FATIGUE RESISTANCE:

Outstanding compressive creep resistance and dimensional stability under long-term dynamic loading for highly reliable applications.

●SUPERIOR MACHINABILITY:

Excellent cutting and machining performance, suitable for high-precision CNC processing, milling, and customized shaping requirements.

●HIGH TEMPERATURE RESISTANCE:

Designed for aerospace-grade medium- and high-temperature autoclave curing processes without performance degradation.

●LOW DIELECTRIC LOSS:

Excellent electrical insulation and ultra-low dielectric loss, making it an ideal core material for radar radomes and electronic applications.

TECHNICAL CHARACTERISTICS

Characteristics	Test Procedure	Unit	F32	F52	F75	F110	F200
Thermal Conductivity	EN 12667	W/(m-K)	0.029	0.03	0.032	0.035	0.038
Heat Deflection Temperature	DIN 53424	°C	190	190	190	190	190
Dissipation Factor	ASTM D 2520	/	0.0002	0.0003	0.0005	0.0007	0.001
Dielectric Constant	ASTM D 2520	/	1.03	1.05	1.08	1.11	1.15

***Note:** The above data represent average values obtained from routine production testing. For applications involving elevated temperatures or continuous loads, please contact our technical service department for design guidance.Maximum processing temperature depends on time, pressure, and process conditions. Please consult our technical service department to verify compatibility with the intended processing parameters for TEAMFOAM®-F foam cores.

DIMENSIONS

Format	Specifications	Unit	F32	F52	F75	F110	F200
Plain sheet	L	mm	2500	2500	2500	2200	1750
	W	mm	1250	1250	1250	1150	900
	THK.	mm	1-120	1-105	1-90	1-80	60
GS sheet	L	mm	1250	1250	1250	1125	/
	W	mm	1250	1250	1250	1150	/
	THK.	mm	5-65	5-65	5-65	5-65	/

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

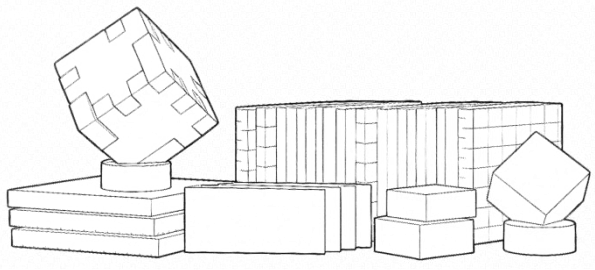
TEAMFOAM®-F IS TYPE APPROVED BY:

RoHS

ISO 9001:2015 COMPANY · ISO 14000 · ISO 45001 CERTIFIED

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.



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