HORIZON
Redefine Materials Frontier

TEAMFOAM

TECHNICAL DATA



TEAMFOAM®-TE

GENERAL-PURPOSE PMI FOAM CORE

TEAMFOAM®-TE Series is a high-performance cross-linked rigid foam made of PMI (polymethacrylimide). Unlike conventional PMI foam products, TEAMFOAM®-TE Series not only maintains the material characteristics of polymethacrylimide—such as high mechanical performance and a uniform, dense cell structure—but also significantly reduces product costs through chemical modification and more stringent polymerization control. TEAMFOAM®-TE Series foam can withstand temperatures up to approximately 160°C, making it compatible with a wide range of composite material processing techniques and highly compatible with various resin systems. It is an ideal core material for lightweight, high-strength composite sandwich structures. Due to these advantages, TEAMFOAM®-TE is widely used in aerospace, military radar, high-speed rail and urban rail transit, ships and yachts, automotive manufacturing, sports equipment, medical devices, acoustic manufacturing, electronics, and other fields.

MECHANICAL PROPERTIES

Property	Test Procedure	Unit	Statistical Value	TE52	TE60	TE75	TE110
Density	ISO 845	kg/m³	Max.	58	68	87	126
			Avg.	52	60	75	110
			Min.	46	52	63	94
Compressive Strength	ISO 844:2006	MPa	Avg.	0.97	1.05	1.89	2.61
Compressive Modulus	ISO 844:2006	MPa	Avg.	87.53	111.47	163.63	202.5
Tensile Strength	ASTM D638	MPa	Avg.	1.31	1.45	2.33	2.79
Tensile Modulus	ASTM D638	MPa	Avg.	111.06	113.79	185.17	224.6
Shear Strength	ASTM C273:2012	MPa	Avg.	0.86	0.9	1.14	1.42
Shear Modulus	ASTM C273:2012	MPa	Avg.	29.62	32.6	43.2	63.7

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

PRODUCT CHARACTERISTICS

- **OUTSTANDING MECHANICAL PERFORMANCE:**
  Provides industry-leading strength and stiffness among core materials of the same density,delivering excellent mechanical performance while significantly reducing structural weight.
- **PROCESS-FRIENDLY STRUCTURE:**
  100% closed-cell structure with uniform and fine cells ensures low resin absorption and compatibility with various molding processes,improving production efficiency.
- **HIGH TEMPERATURE RESISTANCE:**
  High heat deflection temperature enables compatibility with demanding high-temperature processing and curing conditions.
- **BROAD RESIN COMPATIBILITY:**
  Compatible with a wide range of resin systems,providing excellent adaptability for composite manufacturing.
- **HIGH DESIGN FLEXIBILITY:**
  Excellent thermoforming capability supports complex geometries and flexible design requirements across diverse applications.
- **EXCELLENT FATIGUE RESISTANCE:**
  Suitable for sandwich structures subjected to dynamic loading,ensuring long-term durability and service life.
- **STABLE PHYSICAL PROPERTIES:**
  Features an extremely low coefficient of thermal expansion,along with excellent dielectric properties and X-ray transparency.

TECHNICAL CHARACTERISTICS

Characteristics	Test Procedure	Unit	TE52	TE60	TE75	TE110
Thermal Conductivity (20℃)	EN 12667	W/(m-K)	0.031	0.033	0.035	0.038
Heat Deflection Temperature	DIN 53424	℃	160	160	160	160
Dissipation Factor	ASTM D 2520	/	0.0003	0.0004	0.0005	0.0007
Dielectric Constant	ASTM D 2520	/	1.05	1.06	1.08	1.11

***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®-TE foam cores.

DIMENSIONS

Format	Specifications	Unit	TE52	TE60	TE75	TE110
Plain sheet	L	mm	2500	2500	2500	2250
	W	mm	1250	1250	1250	1150
	THK.	mm	1-100	1-90	1-85	1-75
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.

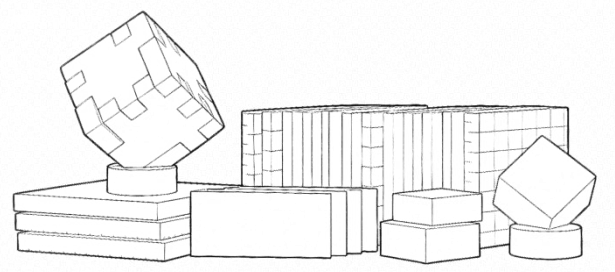
TEAMFOAM®-TE CERTIFICATIONS, APPROVALS & COMPLIANCE:

RoHS

ISO 9001:2015 COMPANY · ISO 14000 · ISO 45001

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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