

Cement Engineering Board

TENMAT REFRAVER has been developed to provide outstanding service in demanding thermal applications where a quality high strength machinable engineering board is required with low water absorption and the retention of good electrical properties even in humid conditions. It has proved particularly suited to arc chutes and tubes.

TENMAT REFRAVER S has enhanced resistance to water absorption via a proprietary silicone treatment.

TENMAT REFRAVER and REFRAVER S are generally supplied in component form. Alternatively, sheets are available of sizes 860 x 1200 mm of thicknesses between 5 and 50 mm.

TENMAT is proud to supply REFRAVER into high speed rail applications.



PROPERTY	UNITS	REFRAVER	REFRAVER S
Density	g / cm ³	1.9	1.9
Compressive Strength	MPa @ ambient	79	79
Flexural Strength	MPa @ ambient	37	37
Water Absorption	% in 24 hours @ 23 °C	5	2
Electric Strength @ 90 °C	KV/mm in air	1	1
Surface Breakdown @ 90 °C	KV in air	11	11
Maximum Continuous Operating Temperature	°C	500	500

The information contained in this data sheet is presented in good faith. They are typical test results tested generally in accordance with BS 2782 and ASTM test methods and should not be used for specifications. **TENMAT** does not warrant the conformity of its materials to the listed properties or their suitability for any particular purpose. For further information please contact our Technical Sales Department on +44 161 872 2181.

Cement Engineering Board

TENMAT SINDANYO H91 has been specially developed to provide outstanding service in demanding thermal applications, where a quality, high strength, machineable engineering board is required.

TENMAT SINDANYO H91 exhibits excellent strength even at high temperatures reaching up to 700 °C. This, alongside it being asbestos-free, has underlined H91's position as the leading engineering cement available.

TENMAT SINDANYO is available in sheets of approx. dimensions 1245 x 940 mm with thickness between 6 and 75 mm. Alternatively, **TENMAT** SINDANYO machined components are available on request.



PROPERTY	UNITS	H91
Density	g / cm ³	1.6
Compressive Strength	MPa @ ambient	90
	24 hours @ 350 °C	38
	24 hours @ 500 °C	31
	24 hours @ 700 °C	29
Flexural Strength	MPa @ ambient	30
	24 hours @ 350 °C	16
	24 hours @ 500 °C	13
	24 hours @ 700 °C	13
Impact Strength	Kj/mm @ ambient	4
	24 hours @ 350 °C	2.4
	24 hours @ 500 °C	2.4
	24 hours @ 700 °C	2.4
Linear Shrinkage	% @ 350 °C	0.36
Water Absorption	% in 24 hours @ 23 °C	15
Electric Strength @ 90 °C	KV/mm in air	2.1
Surface Breakdown @ 90 °C	KV in air	15
Maximum Continuous Operating Temperature	°C	700

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Cement Engineering Board

TENMAT SINDANYO H93 has been specially developed to provide outstanding service in demanding thermal applications, where a quality, high strength, machineable engineering board is required.

TENMAT SINDANYO H93 exhibits excellent strength even at high temperatures reaching up to 700°C, and has a high resistance to moisture absorption via a surface proprietary silicone treatment.

TENMAT SINDANYO is available in sheets of approx. dimensions 1245 x 940 mm with thickness between 6 and 75 mm. Alternatively, **TENMAT** SINDANYO machined components are available on request.



PROPERTY	UNITS	H93
Density	g / cm ³	1.8
Compressive Strength	MPa @ ambient	107
Flexural Strength	MPa @ ambient	30
Impact Strength	Kj/mm @ ambient	6.5
Linear Shrinkage	% @ 350 °C	0.36
Water Absorption	% in 24 hours @ 23 °C	8 max
Electric Strength @ 90 °C	KV/mm in air	2.1
Surface Breakdown @ 90 °C	KV in air	14
Maximum Continuous Operating Temperature	°C	700

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Cement Engineering Board

TENMAT SINDANYO H96 has been specially developed to provide outstanding service in demanding thermal applications, where a quality, high strength, machineable engineering board is required.

TENMAT SINDANYO H96 exhibits excellent strength even at high temperatures reaching up to 500 °C. This, alongside it being asbestos-free, has underlined H96's position as the leading engineering cement available.

TENMAT SINDANYO H96 is resistant to moisture ingress via a vacuum impregnated proprietary silicone treatment. This is available in component form and in sheets of 620 x 940 mm and up to 25mm thickness.



PROPERTY	UNITS	H96
Density	g / cm ³	2.2
Compressive Strength	MPa @ ambient 24 hours @ 350 °C 24 hours @ 500 °C	130 75 55
Flexural Strength	MPa @ ambient 24 hours @ 350 °C 24 hours @ 500 °C	37 28 23
Impact Strength	Kj/mm @ ambient 24 hours @ 350 °C 24 hours @ 500 °C	4 3 2.9
Linear Shrinkage	% @ 350 °C	0.36
Water Absorption	% in 24 hours @ 23 °C	1
Electric Strength @ 90 °C	KV/mm in air	2
Surface Breakdown @ 90 °C	KV in air	15
Maximum Continuous Operating Temperature	°C	500

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Cement Engineering Board

TENMAT SINDANYO has been developed to provide outstanding service in demanding thermal applications where a quality high strength machineable engineering board is required.

TENMAT SINDANYO is available in sheets of approx. dimensions 1245 x 940 mm with thickness between 6 and 75 mm. Alternatively, **TENMAT SINDANYO** machined components are available on request.

TENMAT SINDANYO L23 has a higher resistance to moisture absorption via a surface proprietary silicone treatment.

TENMAT SINDANYO L26 is resistant to moisture ingress via a vacuum impregnated proprietary silicone treatment. This is available in component form and in sheets of 620 x 940 mm and up to 25mm thickness.



PROPERTY	UNITS	L21	L23	L26
Density	g / cm ³	1.9	1.8	1.9
Compressive Strength	MPa @ ambient	95	85	87
Compressive Yield	%	3	3	2
Shear Strength	MPa @ ambient	20	29	26
Flexural Strength	MPa @ ambient	25	32	37
Water Absorption	% in 24 hours @ 23 °C	16	8	1
Electric Strength @ 90 °C	KV/mm in air	2	2	2.9
Surface Breakdown @ 90 °C	KV in air	14	16	17
Thermal Conductivity	W/mK	0.5	0.5	0.5
Maximum Continuous Operating Temperature	°C	230	230	230
Maximum Intermittant Operating Temperature	°C	250	250	250

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