



E-Glass Needleemat

E-Glass Needleemat is a long strand textile grade borosilicate glass fibre, which is mechanically consolidated, to form a felt capable of withstanding severe thermal shock and vibration. E-Glass Needleemat is stable in arduous environments and does not accelerate corrosion of metallic components. Excellent thermal and acoustic properties make E-Glass Needleemat suitable for use in many types of application. High uniformity and excellent acoustic absorption from relatively low thickness make E-Glass Needleemat suitable for incorporation into acoustic curtains and panels, for applications where a combination of acoustic absorption (typically on one side) and sound blocking is required, for example an Oil Rig Compressor Room .

Chemical Analysis

Silicon Oxide	SiO ₂	54.5%
Aluminium oxide	Al ₂ O ₃	14.8%
Iron Oxide	Fe ₂ O ₃	0.1%
Calcium Oxide	CaO	17.6%
Magnesium Oxide	MgO	4.5%
Sodium Oxide	Na ₂ O	0.4%
Potassium Oxide	K ₂ O	0.1%
Boron Oxide	B ₂ O ₃	8.0%



PHYSICAL CHARACTERISTICS

Typical Filament Diameter Characteristics

Diameter (microns)	6	7	8	9	100	11	12
Contribution (%)	3	13	37	32	8	5	2

Mean Filament Length 100mm
Nominal Density 140kg/m³
Thermal Properties

Temperature	10	50	100	150	200	250	300	350	400
K value	0.042	0.044	0.048	0.054	0.062	0.071	0.082	0.094	0.108

Peak Operational Temperature 600°C

Acoustic Properties

Typical Absorption Coefficients (a) at frequency and thickness

Thickness (mm)	Frequency (Hz)	100	200	400	800	1600	3150	6300
25		0.10	0.18	0.26	0.60	0.88	0.95	0.99
12		0.06	0.12	0.18	0.38	0.76	0.89	0.92

Note: The information and instructions provided in relation to our products are based on experimental and practical experience and are general recommendations. Local conditions can affect the results and as the qualification and experience of the personnel used in the installation is beyond the control of Cammach Group Ltd we do not take responsibility for the results obtained when using our products.

