

acoustic materials



Sound Absorptive Melamine Foam and Barrier Mats

Acoustic foam suitable for architectural/building applications and barrier materials for adding mass to various substrates. Most products are supplied in standard sheets or can be pre-cut for specific applications, to ease installation.

Melamine Acoustic Foam

This is an extremely light weight material that is easy to handle and, unlike conventional polyurethane foams, does not emit toxic fumes when exposed to heat. Compliance with the Class 0 requirements of BS476: Part 6: 1981 and Part 7: 1987 make this the ideal choice for building applications where it can be used in areas with temperatures as high as 150°C. Various thicknesses can be supplied, although for most applications 25 or 50mm is usual. The standard sheet size is 2500mm x 1250mm and the nominal density is 9.5kg/m³. The material, which can be supplied in either grey or white, provides the following sound absorption coefficients.

Frequency (Hz)	125	250	500	1k	2k	4k
25mm thick	0.04	0.22	0.54	0.74	0.88	0.92
50mm thick	0.22	0.46	0.95	1.0	1.0	1.0

Care must be taken when installing melamine foam, as dimensional changes may occur dependant on the relative humidity of the installation environment. Allowances should therefore be made, based on the anticipated moisture content, to ensure that 'shadow gaps' are left between sheets of material, particularly where these may be visible. The material weighs 9.5kg/m³ +/- 1.5kg/m³ and can be bonded to most substrates using a 'low modulus' silicone mastic. The adhesive should be applied to the substrate and not the foam, using beads at 150mm centres, starting/finishing 25mm inboard of the sheet edge. Melamine foam is resistant to hydrolysis, alcohols, hydrocarbons and most organic solvents.

Barrier Materials

Manufactured from flexible polymeric material, barrier mats are designed to add mass and hence improve the sound transmission loss of the host substrate. The polymeric material incorporates mineral fillers to increase mechanical strength and durability. The material is particularly effective at reducing 'coincidence dip' when incorporated into secondary wall structures. Suitable for use at continuous operating temperatures up to 65°C and compliant with FMVSS 302/ISO3795. The standard sheet size is 2000mm x 1000mm x 2.5mm thick, weighing 5kg/m². The material provides the following octave band centre frequency sound transmission losses .

Frequency (Hz)	125	250	500	1k	2k	4k
STL(dB)	12	12	21	27	30	34