



## VI-SONITE UF Acoustic Foam

Lightweight open-cell foam with excellent sound absorption and thermal insulation properties, suitable for providing effective and aesthetically pleasing treatment solutions. Unlike PU acoustic foam, VI-SONITE UF is light and naturally fire retardant without addition of fire retardant chemical. PU acoustic foams are heavy and the fire retardant chemical used to smother the fire emits toxic smoke when burned. Smoke blind vision and intoxicate building occupants.

Conventional insulation such as glasswool or mineral wool are subject to erosion and cause itching during handling.

VI-SONITE UF acoustic foams are fabricated with Basotect® by BASF® of Germany. Basotect® is manufactured from melamine which is naturally fire retardant.

1 &gt;&gt;



2 &gt;&gt;



3 &gt;&gt;



*For better indoor air quality and safety, we promote the use of melamine acoustic foam.*

## SPECIFICATIONS

Largest Dimension	2500 x 1250 x 500mm
Minimum Thickness	10mm
Maximum Thickness	200mm
Weight	7 kg/m <sup>3</sup>
Absorption Rating	Up to 1.0 NRC
Profile	Flatsheet

Custom sizing, thickness and shape are available upon request. Other foam profiles like eggcrate, wedge and pyramid may be available upon request.

## APPLICATION

- Due to its excellent properties, VI-SONITE UF acoustic foam is ideal for many applications. It may be used bare applied to wall or ceiling surface in area with very high reverberation such as swimming pool, sports hall or gymnasium, factory, etc. Slab of bare foam may be suspended from ceiling to achieve significant sound absorption and are found to be effective at reducing reverberation in a room

- For aesthetic reason and for installation at low level, foam may be used concealed behind perforated wall or ceiling panel for maximum absorption

- Due to its erosion resistance, the foam may be used in air-conditioning plant room wall (AHU) and duct internal insulation for absorption of equipment noise without the need for a perforated metal protection

- In places of gathering such as large conference room or small meeting room, places of worship, reception area, sports hall, and multi-purpose hall, the foam can be effectively applied to wall surface with fabric to give attractive appearance to the interior design

- In dining area the foam can be used with fabric and polyester film to protect the foam from accumulating food smell. The polyester film is acoustically transparent and test shows that the polyester film will not affect the absorption property of the foam. Hence, the acoustic foam can be used to its full lifespan. The fabric may be cleaned and replaced



VI-SONITE UF acoustic foam being used on various types of environment, (1) Acoustic baffles are hung on top of office cubicles, (2) Full acoustic treatment done on a meeting room, (3) NoiseSucker installed on an office hallway, (4) Custom-design acoustic fabric panels in a condominium unit, and (5) Ductwork internal insulation.



## PROPERTIES

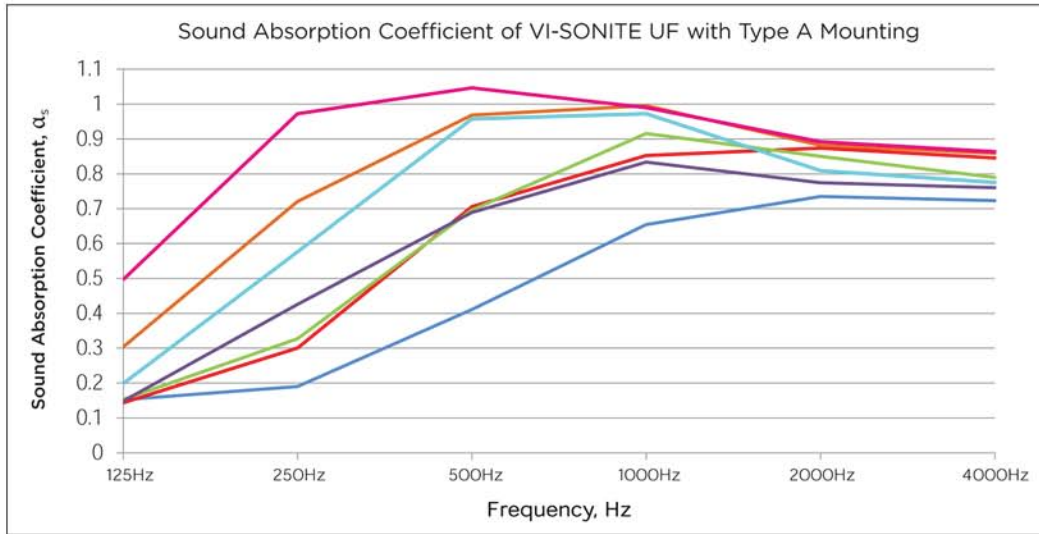
The thermoset character and the open-cell structure of the melamine resin foam translate into an attractive property profile:

- Low emission
- Extreme low weight at  $7 \text{ kg/m}^3$
- High sound absorption up to 1.0 NRC
- Erosion resistance to 13 m/s air velocity
- No brittleness at low temperature of  $-150^\circ\text{C}$
- High long-term operating temperatures of  $150^\circ\text{C}$
- Flame retardant with Class "O" rating to BS 476: Part 6 and 7
- Low thermal conductivity with values of  $0.032 - 0.038 \text{ W/mK}$  at  $10^\circ\text{C}$

## PERFORMANCE

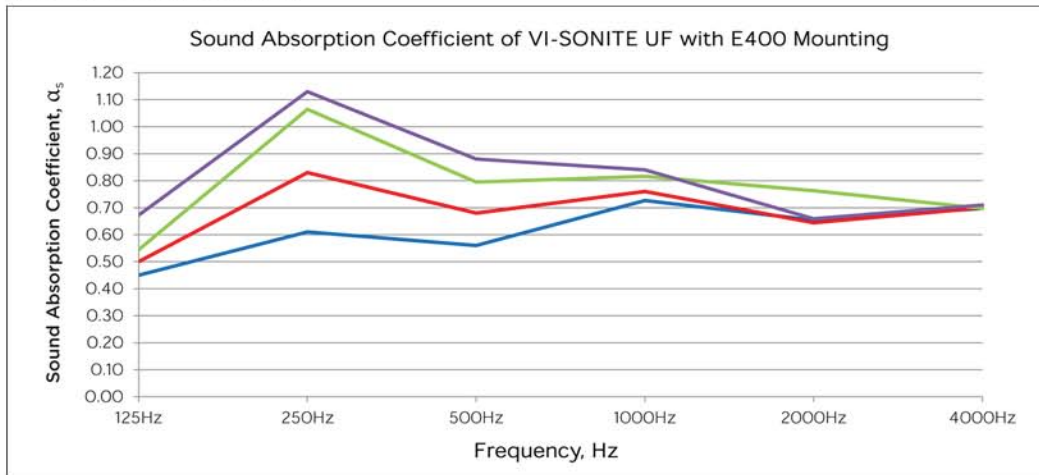
VI-SONITE UF acoustic foam has been tested for Sound Absorption according to ASTM C423-02a "Standard Test Method for Sound Absorption and Sound Absorption Coefficients by the Reverberation Room Method"; and BRITISH STANDARD 476: Part 6: 1989 "Fire Propagation" and BRITISH STANDARD 476: Part 7: 1997 "Surface Spread of Flame". Test report is available upon request.

VI-SONITE acoustic foam is tested according to ASTM C423-02a with Type A Mounting\*



Description of Flat sheet Acoustic Foam	Sound Absorption Coefficient, $\alpha_s$						NRC
	Frequency, Hz						
	125Hz	250Hz	500Hz	1000Hz	2000Hz	4000Hz	
25mm VI-SONITE UF Flat sheet	0.15	0.19	0.41	0.65	0.74	0.72	0.50
25mm VI-SONITE UF Flat sheet with Fabric	0.14	0.30	0.71	0.85	0.87	0.85	0.70
25mm VI-SONITE UF Flat sheet with Fabric & Polyester Film	0.15	0.33	0.70	0.92	0.85	0.79	0.70
50mm VI-SONITE UF Flat sheet	0.15	0.43	0.69	0.83	0.77	0.76	0.70
50mm VI-SONITE UF Flat sheet with Fabric	0.20	0.58	0.96	0.97	0.81	0.77	0.85
100mm VI-SONITE UF Flat sheet	0.30	0.72	0.97	1.00	0.88	0.86	0.90
100mm VI-SONITE UF Flat sheet with Fabric	0.50	0.97	1.05	0.99	0.89	0.86	1.00

VI-SONITE acoustic foam is tested according to ASTM C423-02a with E400 Mounting\*\*



Description of Flat sheet Acoustic Foam	Sound Absorption Coefficient, $\alpha_s$						NRC
	Frequency, Hz						
	125Hz	250Hz	500Hz	1000Hz	2000Hz	4000Hz	
25mm VI-SONITE UF	0.45	0.61	0.56	0.73	0.65	0.70	0.65
50mm VI-SONITE UF	0.50	0.83	0.68	0.76	0.64	0.70	0.75
50mm VI-SONITE UF with black tissue	0.54	1.06	0.80	0.82	0.76	0.70	0.85
100mm VI-SONITE UF	0.67	1.13	0.88	0.84	0.66	0.71	0.90

\* ASTM E795-00 Type A Mounting - Test specimen laid directly against the test surface.

\*\* ASTM E795-00 E400 Mounting - Test specimen mounted with an air space behind it.

