



FIRESEAL™



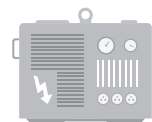
Building Acoustics



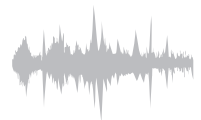
Marine



Heating and Ventilation



Generator Enclosures



Sound Absorption



FIRESEAL™

Making our environment
a quieter, safer, cleaner place.

FIRESEAL™
acoustic by design.

- **FIRESEAL™** has been developed to provide excellent sound absorption in the troublesome low frequency range, whilst offering high levels of absorption at the mid and high frequency end.
- **FIRESEAL™** also has the ability to act as a membrane absorber across the full frequency spectrum when specified with the correct material thickness & choice of facing.
- High mass ensures **FIRESEAL™** gives excellent damping performance when applied to rigid substrates, greatly improving sound breakout.
- Production batch testing designed to give maximum confidence in product quality and repeatability.



The European standard EN 13501-1: Reaction to Fire provides a number of performance criteria to measure the fire characteristics of building products. These cover spread of flame and contribution to fire as well the generation of smoke and the production of burning droplets.

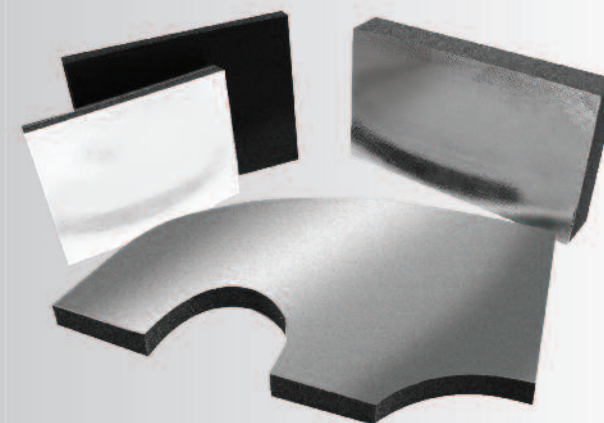
FIRESEAL™ achieves a **B-s1,d0**

B very low flammability

s1 low smoke

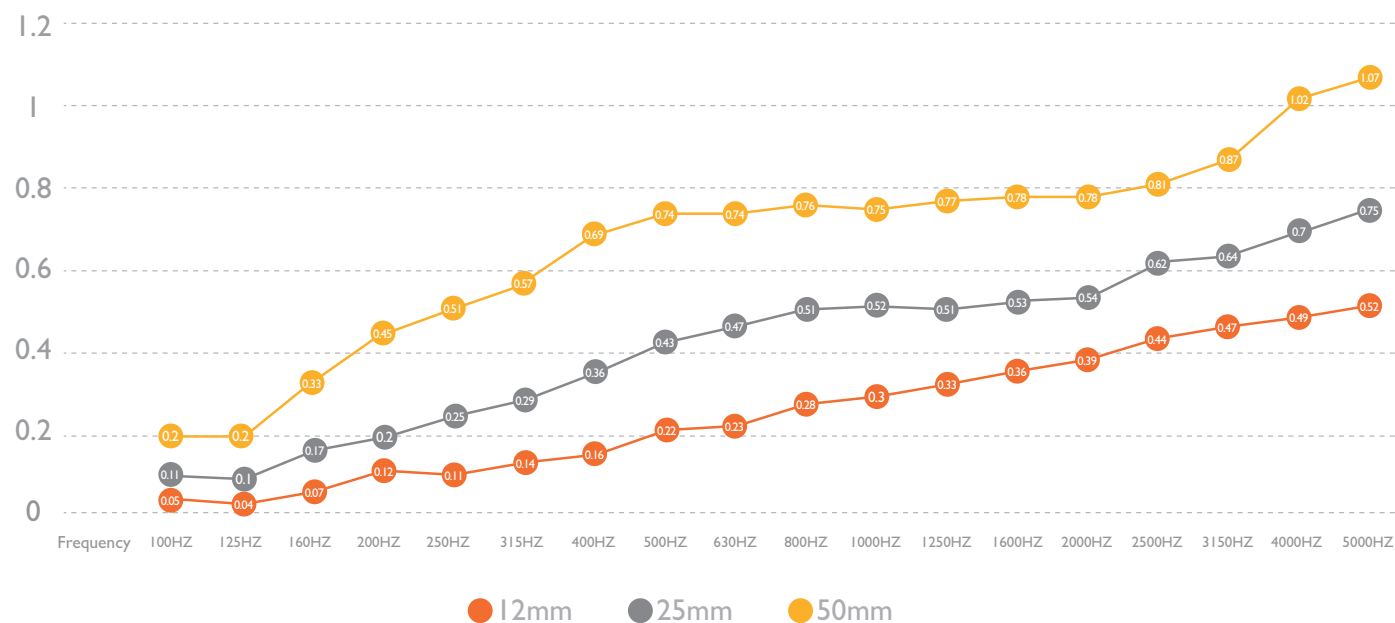
d0 no droplets

FIRESEAL™
composites



Now tested to European Standard EN 13501-1 B-s1,d0

Measurement of absorption in a reverberation room.
BS EN ISO 354:2003



Typical acoustic performance of Carpenter **FIRESEAL™**
Acoustics - Measurement of Absorption in a Reverberation Room
BS EN ISO 354:2003

Carpenter **FIRESEAL™** is a flexible open celled polyurethane acoustic foam. Offering excellent sound absorption characteristics whilst meeting the test criteria of some of the highest fire resistant testing standards including BS476 pt6 & pt7 (Class "0") along with UL94V-0, European standard EN 13501-1 B-s1,d0.

FIRESEAL™ is a chemically inert product. It will not dust or migrate when subjected to air movement. Its flexibility offers easy application to curved or complex surfaces and can be readily cut or pressed into a variety of desired shapes.

Carpenter **FIRESEAL™** is used by many industries including Heating & Ventilation (HVAC), Marine acoustics, Original Equipment Manufacturers (OEM) and the Construction industry.

TYPICAL APPLICATIONS

- Internal lining of ventilation ductwork and ventilation equipment.
- Sound absorption in marine engine rooms.
- Generator and compressor enclosures.
- Acoustic enclosures.
- Sound absorbing panels for the construction industry.
- International construction projects.

FIRESEAL™

Founded by E. Rhodes Carpenter in 1948, in Richmond Virginia, Carpenter is the world's leading manufacturer of polyurethane foam and polyester fibre comfort cushioning. The company is still privately held and solid thanks to longevity of management. We are successful because we heed the lessons history teaches and enthusiastic because we take genuine pleasure in making excellent products and providing superior customer service.

Carpenter was born of the entrepreneurial spirit shaped by a sharp focus on what we do best and nurtured by a passion for quality. Long before such terms became fashionable, we established our "core business", practiced "total quality management", and made "continuous improvement" our daily routine.

Disclaimer
Whilst every effort is made to ensure its accuracy, the data on this sheet is meant for information purposes only. The typical properties listed are the result of extensive laboratory tests, but since Carpenter has no control over the end use of each material, we cannot guarantee these results are obtained in practice. Users may want to conduct their own tests to determine the suitability of each material to its intended application.

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| | | |
|-----------------------|--|---|
| Product | F036 | |
| Type | Impregnated PU Foam | |
| Colour | Dark Grey | |
| Density | >90kg/m3 | |
| Thickness | 6mm - 100mm | |
| Operating Temperature | - 30°C to 100°C | |
| Fire Performance | EN 13501-1 Euro Class* | B-s1,d0 |
| | BS 476 Part 6 Fire Propagation Index | <12 >6mm |
| | BS 476 Part 7 Surface Spread of flame | Class I |
| | Building Regulations Paragraph A13 (b) | Class 0 |
| | ASTM E84-09 Surface Burning Characteristic | Flame Spread index 10 Smoke Developed Index 20 |
| | ASTM C411-04 Hot Surface Performance @100°C 96hr | Pass |
| | UL94 Classification | 94-V-0 |
| | ASTM C1071-05 12.7 Air Erosion Resistance 6 - 50mm | Pass |
| | ASTM D-2020-92 Mildew (Fungus) Resistance | Does not support growth |
| | ASTM G21-96 Fungus Resistance Test | Does not support growth |
| | ASTM C1104-06 Water Vapour Sorption | <9% |
| | ASTM C518-04 Thermal Conductivity | 0.32 Btu-in/ft ² -hr°F @6mm |

| | | |
|----------------------|-------------------------|-----------------|
| Acoustic Performance | | |
| | Sound Absorption @ 12mm | α_w 0.30 |
| | Sound Absorption @ 25mm | α_w 0.45 |
| | Sound Absorption @ 50mm | α_w 0.75 |

* Certification of Euroclass 6mm - 50mm adhered, 50mm unadhered

