

SORBERFOAM™ PU

polyurethane film faced acoustic foam

Sorberfoam™ PU combines the next generation of combustion modified, flexible acoustic foams, with a tough polyurethane, tear resistant surface covering, enhancing sound absorption in mid to high frequencies. It was developed to meet market requirements for reducing reflected reverberated noise in industrial and domestic enclosure, OEM and marine markets.

In conjunction with leading laboratories and test facilities, Pyrotek has formulated and developed polyurethane foam that outperforms traditional acoustic foams by controlling the cell size, porosity, density and the flow resistivity throughout the cell structure.

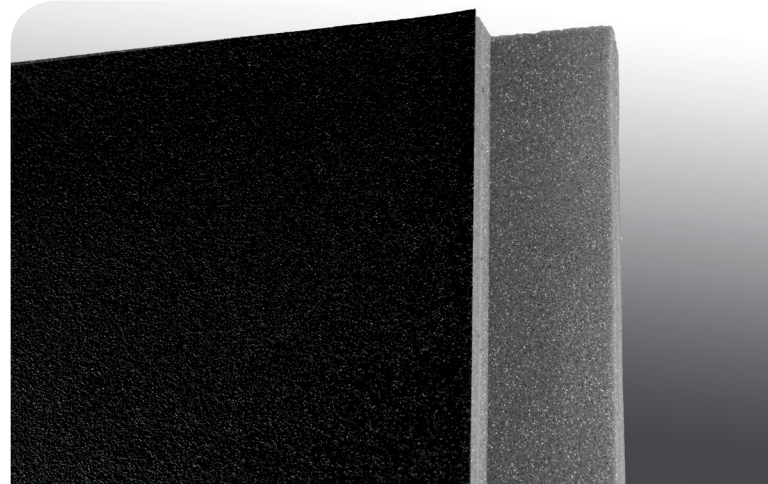
Sorberfoam has been proven to absorb substantially more energy across the entire frequency range than traditional polyurethane foams. The facing used on Sorberfoam PU is applied by using a sophisticated process that optimises flow resistivity and maximises sound absorption. It acts as a protective facing in environments where sprays or dust may contaminate porous material with the black finish providing a more discreet look.

Traditional polyurethane foams often break down through hydrolysis (foam rot) under hot, humid and acidic conditions. Sorberfoam PU is engineered to resist degradation or foam rot.

Sorberfoam PU offers an alternative to mineral fibre products that tend to shed fibres during application. The tendency for fibrous products to lose thickness over a period of time means their absorption properties will also be reduced. Sorberfoam PU eliminates this hazard offering a safer alternative in noise absorption.

SPECIFICATIONS

Surface Colour	Black, others on request
Standard (Rolls or sheets)	Available in 15, 30, 60 m rolls Other roll lengths and sheet sizes also available
	Thicknesses from 6 to 100 mm
	1.4 m usable width (untrimmed)



applications

- Machinery and equipment enclosures
- Compressor and generator set enclosures
- Electronic and electrical equipment cabinets
- Air conditioning units
- Insulation and interior sound absorption
- Electronic and electrical equipment
- Wall and ceiling linings for plant and equipment rooms

features

- PU facing outperforms comparative products at lower frequencies
- Tough puncture resistant surface repels contamination from dust, oils, liquids, fuels or sprays
- Does not shed irritating fibres
- Hydrolysis (foam rot) resistant
- No ozone-depleting substances generated during manufacture, free from formaldehyde and phenolic resins
- Low spread of flame surface
- Self-extinguishes upon flame removal
- Quick and easily installed in awkward places
- Easy to cut, adhere or mechanically fasten
- Available with self-adhesive backing for ease of install
- Available in thicknesses from 6 to 100mm
- All rolls are typically supplied at 1400mm (untrimmed)
- Matching self-adhesive tape or sprayable PU coating is available for sealing joins and edges of foam

PRODUCT SPECIFICATIONS

Standard thickness (mm)	Density (kg/m ³)	Roll length (lineal m)	Roll width (mm)	Thermal conductivity (W/mK)	Operating temperature range °C
6	28	60	1400*	0.033**	-40 to +90 Continuous -40 to +110 Intermittent
12		60			
25		30			
50		15			

Tolerances: Length: -0 to +50mm; Width: -0 to +5mm; Thickness: +/- 2mm; Density: +/- 5%

*Supplied untrimmed - means some surface coverings such as foils, film or fabric may overhang the ordered useable width

**Polyurethane handbook: Chemistry, Raw Materials, Processing, Application, Properties 2nd edition.

All above products are available with pressure-sensitive adhesive backing. Under extreme temperature conditions or where the substrate surfaces cannot be free from contaminants, mechanical fixing will be required on vertical surfaces. For all inverted installations including ceiling installations, mechanical fixing must be done in addition to PSA adhesion. Please consult your local Pyrotek representative for more information.

MATERIAL PROPERTIES

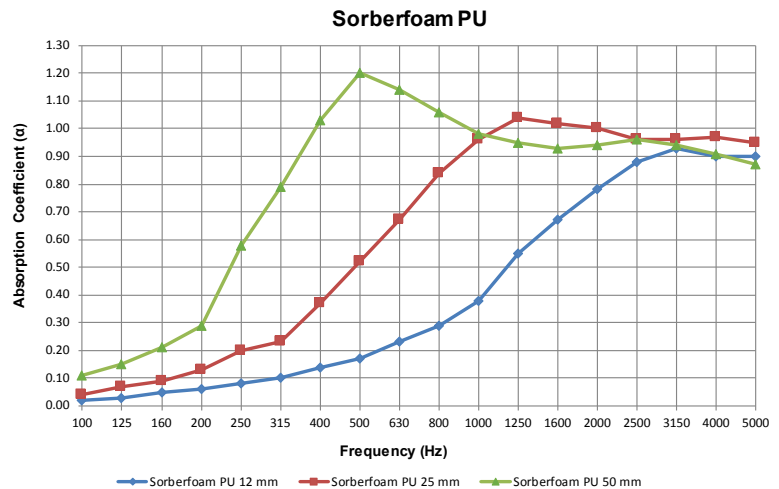
Test method	Index	Results	Description
UL94	After flame time ≤ 2 seconds	HBF*	Horizontal burn test for foam materials.
FMVSS-302	Burn rate - mm/min	Self extinguishing	Automotive burn rate test.

*Result applies to 12mm thickness.

ACOUSTIC PERFORMANCE

Frequency (Hz)	12 mm	25 mm	50 mm
100	0.02	0.04	0.11
125	0.03	0.07	0.15
160	0.05	0.09	0.21
200	0.06	0.13	0.29
250	0.08	0.20	0.58
315	0.10	0.23	0.79
400	0.14	0.37	1.03
500	0.17	0.52	1.20
630	0.23	0.67	1.14
800	0.29	0.84	1.06
1000	0.38	0.96	0.98
1250	0.55	1.04	0.95
1600	0.67	1.02	0.93
2000	0.78	1.00	0.94
2500	0.88	0.96	0.96
3150	0.93	0.96	0.94
4000	0.90	0.97	0.91
5000	0.90	0.95	0.87
NRC	0.35	0.65	0.95
SAA	0.36	0.66	0.90
α_w	0.30 (H)	0.50 (MH)	0.85

Tested to ISO 354:2003 at University of Canterbury, New Zealand
Report Number: 291, 292 & 293



For further information and contact details, please visit our website pyroteknc.com

Caveats: Specifications are subject to change without notice. The data in this document is typical of average values based on tests by independent laboratories or by the manufacturer and are indicative only. Materials must be tested under intended service conditions to determine their suitability for purpose. The conclusions drawn from acoustic test results are as interpreted by qualified independent testing authorities. Nothing here releases the purchaser/user from responsibility to determine the suitability of the product for their project needs. Always seek the opinion of your acoustic, mechanical and fire engineer on data presented by the manufacturer. Due to the wide variety of individual projects, Pyrotek is not responsible for differing outcomes from using their products. Pyrotek disclaims any liability for damages or consequential loss as a result of reliance solely on the information presented. No warranty is made that the use of this information or of the products, processes or equipment to which this Information Page refers will not infringe any third party's patents or rights. DISCLAIMER: This document is covered by Pyrotek standard Disclaimer, Warranty and © Copyright clauses. See pyroteknc.com/disclaimer.

