

# THERMOBREAK® ACOUSTIPLUS

## lightweight duct liner

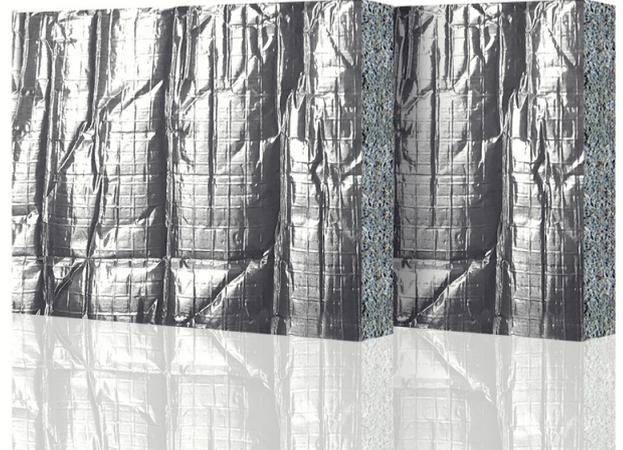
Thermobreak® AcoustiPlus is a premium thermal insulation product manufactured from physically crosslinked, closed-cell polyolefin foam. The majority of open-cell foam or fibre-based thermal insulation products suffer from poor performance in the presence of moisture. Thermobreak® AcoustiPlus, however, maintains its excellent thermal insulation properties when exposed to moisture.

Thermobreak® AcoustiPlus can replace conventionally used polyester or glass-based sound absorbers for HVAC duct lining. It is designed to not hold or absorb moisture, nor will the product shed any loose fibres that can go airborne. Lightweight and easy to cut, the product provides comfortable handling compared to fibre-based products.

The flammability properties from Thermobreak® AcoustiPlus meets some of the most stringent fire requirements. It achieves some of the highest fire ratings set out by the rail, building, and aviation industry such as EN 45545-2, BS 476 parts 6 & 7, and BSS 7239.

Thermobreak® AcoustiPlus facing enhances the product performance while also protecting it from water, oil and other liquid ingresses.

*Thermobreak® is a registered trademark of Sekisui Chemical Co. Ltd and is used with permission by Pyrotek as distributors.*



## applications

- Air conditioning duct lining
- HVAC transportation equipment

## SPECIFICATIONS

Colour	Blue-grey - available with aluminium facing
Available	Nominal thickness: 10 mm to 54 mm (0.39 in to 2.13 in)
	Nominal width: 1200 mm (47.24 in)  or custom depending on MOQ

## features

- Excellent thermal properties
- Low VOC - suitable for indoor
- Achieves some of the highest fire ratings
- Lightweight, easy to handle and install
- Low water vapour permeance
- Durable and fibre-free
- Varying range of thicknesses
- Optional adhesive backing available



**PRODUCT SPECIFICATIONS**

Product name	Thickness		Density*	Nominal width (sheet)	Maximum recommended design air velocity	Operating temperature range**
	Nominal	Tolerance				
Thermobreak® AcoustiPlus	10 mm (0.39 in)	-1.0 mm / +1.5 mm (-0.04 in / +0.06 in)	25 kg/m <sup>3</sup> (1.56 lb/ft <sup>3</sup> )	1200 mm (47.24 in)	20.3 m/s (4000 fpm)	-80 °C to +100 °C (-112 °F to 212 °F)
	15 mm (0.59 in)	-1.0 mm / +2.0 mm (-0.04 in / +0.08 in)				
	24 mm (0.94 in)	-1.0 mm / +2.5 mm (-0.04 in / +0.1 in)				
	54 mm (2.13 in)	-2.0 mm / +3.5 mm (-0.08 in / +0.14 in)				

Tolerances: Density ±10%, Width: -0/+20 mm (0.79 in); Other thicknesses and sizes available depending on MOQ. \*Foam core only \*\*Without adhesive backing.

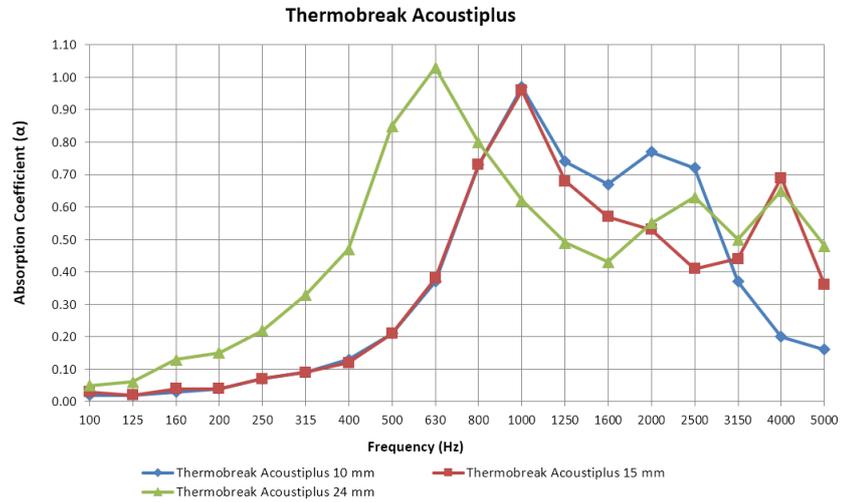
All above products are available with pressure-sensitive adhesive backing. Under extreme temperature conditions or where the substrate surfaces cannot be free from contaminants, mechanical fixing will be required on vertical surfaces. For all inverted installations including ceiling installations, mechanical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

**MATERIAL PROPERTIES**

Test Method	Property	Results
AS 4254	Ductwork for air-handling systems in buildings	Complies
AS 1530 Part 3	Ignitability index	0
	Spread of flame index	0
	Heat evolved index	0
	Smoke developed index	0-1
UL 181 Part 11	Burning test	Complies
DIN 5510-2 (DIN 54837)	Burning behaviour using a gas burner for railway vehicles	S4, SR2, ST2
EN 45545-2 (ISO 5658-2)	Flame spread	R1 , HL3 for thicknesses of 5mm to 50mm
EN 45545-2 (ISO 5659-2 : 50 kWm <sup>-2</sup> )	Smoke density	
	Smoke toxicity	
EN 45545-2 (ISO 5660-1 : 50 kWm <sup>-2</sup> )	Heat release rate	
ASTM E162	Surface flammability	Complies to NFPA 130 Complies for US (FRA) Federal railroad administration requirements (Title 49 - Transportation Part 238) Complies for US (DOT) Department of transportation requirements for acoustic insulation of transit bus and vans (Docket 90-A)
ASTM E662	Optical density of smoke generated	
ASTM E1354	Heat release rate	
BSS 7239 (Boeing)	Smoke toxicity	
BS 476 Parts 6 & 7	Surface spread of flame fire propagation	
ASTM C518	Thermal conductivity	0.035 W/m.K @ 23°C
ASTM C1763, Procedure B, 24h	Water absorption by volume	<0.3% v/v
ASTM C1228	Resistance to fungi	Zero growth
ASTM D5116	VOC emission rate	Low VOC emitting ("Green Star")
ASTM E84 (UL 723)	Surface burning characteristics of building materials	Class A FSI ≤ 25, SDI ≤ 50

## ACOUSTIC PERFORMANCE

Frequency (Hz)	Thermobreak AcoustiPlus 10 mm	Thermobreak AcoustiPlus 15 mm	Thermobreak AcoustiPlus 24 mm
100	0.02	0.03	0.05
125	0.02	0.02	0.06
160	0.03	0.04	0.13
200	0.04	0.04	0.15
250	0.07	0.07	0.22
315	0.09	0.09	0.33
400	0.13	0.12	0.47
500	0.21	0.21	0.85
630	0.37	0.38	1.03
800	0.73	0.73	0.80
1000	0.97	0.96	0.62
1250	0.74	0.68	0.49
1600	0.67	0.57	0.43
2000	0.77	0.53	0.55
2500	0.72	0.41	0.63
3150	0.37	0.44	0.50
4000	0.20	0.69	0.65
5000	0.16	0.36	0.48
NRC	0.50	0.45	0.55
SAA	0.46	0.40	0.55
$\alpha_w$	0.30 (MH)	0.30 (MH)	0.55 (M)



Tested to ISO 354:2003 at CSIRO, Australia  
 Report Numbers: AC234-01-1, AC234-06-1 & AC234-04-1

For further information and contact details, please visit our website [pyroteknc.com](http://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 or 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](http://pyroteknc.com/disclaimer).*

