

# SORBERMIDE™ A

## high performance ultralight acoustic insulation polyimide foam

Sorbermide™ A is one of the lightest and flexible polyimide foams in the market, offering a unique combination of excellent sound-proofing and thermal insulation performance with high fire properties. It was engineered to meet market requirements for a lightweight, high-performance, acoustic and thermal insulation material for demanding industrial environments.

With specialised processing techniques, the foam structure is specially engineered to offer enhanced acoustic properties.

Being extremely light-weight, Sorbermide foam is suited to weight-sensitive applications and high-speed crafts including those in the Marine, Military, Aerospace and Railway industries. Substantial weight-savings to these crafts and vehicles enhance their cost, energy and fuel efficiency. It is also an ideal choice for duct and piping insulation.

Non-toxic and inherently fire-resistant with very low offgassing/outgassing properties, Sorbermide foam can be used in high-temperature environments. Sorbermide is non-fibrous, free from VOC and offers a durable alternative to other lightweight and fibrous insulation materials.

*Sorbermide™ is made using Solimide® TA-301. Solimide® is a trademark of SOLIMIDE® Foams Division of Boyd Corp.*

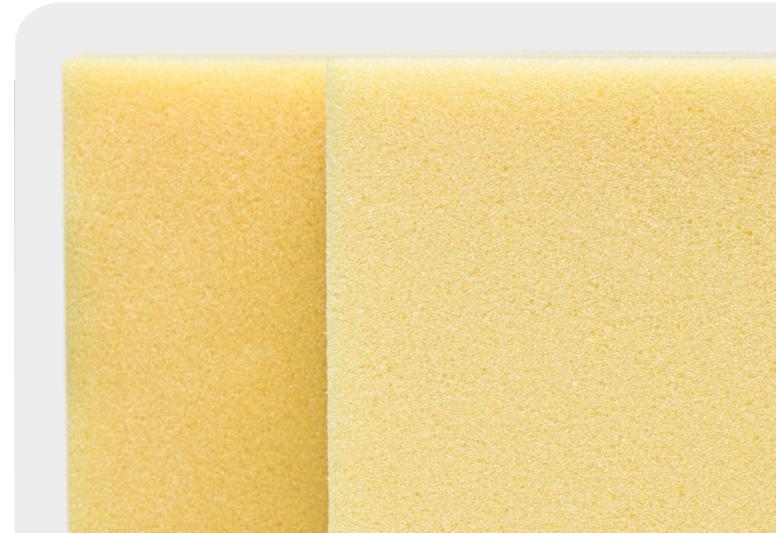
### VOC STATEMENT

Sorbermide™ A does not contain any Volatile Organic Compounds (VOC) when evaluated according to definitions as applied under the Australia National Pollutant Inventory, The Council of the European Union, Council Directive 1999/13/EC or the USA EPA regulation 40 CFR 51.100(s).

### SPECIFICATIONS

Colour	Yellow (foam)
Packaging (Standard)	Sheet size*: 1220 mm x 610 mm
	Thickness: 6 to 200 mm
	Custom depending on MOQ

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



## applications

- Navy : submarines, aircraft carriers, cruisers, destroyers, frigates, minehunters
- Commercial marine: high speed yachts, ferries
- Military armoured vehicles, personnel carriers
- Railway cars and passenger locomotives
- Mining vehicles
- Automotive engine bays, cabin and cavity linings
- High temperature environments, insulation in ovens
- Ducting, duct/piping insulation, structural components, and strengthening of hollow components
- Low outgassing properties makes the product an ideal choice for use in sensitive electronic, medical and analytical instruments

## features

- Sorbermide™ foam meets U.S. Mil Spec DOD-I-24688, Amendment 1
- Extremely lightweight and retains flexibility and dimensional stability over a wide temperature range
- Outstanding thermal and acoustic properties
- Highly fire resistant with low smoke and flame properties
- Very low outgassing and no ozone-depleting substances
- Non-fibrous and easy to handle. No health hazards
- Easy to machine and profile cut, adhere or mechanically fasten into position
- Can be faced with U.S. Mil Spec DOD-I-24688 Type II Class 2 covering
- Can be laminated to other insulation materials to form composites



## PRODUCT SPECIFICATIONS

Standard thickness (mm)	Density (kg/m <sup>3</sup> )	Sheet size* (mm x mm)	Thermal conductivity (w/mk)	Operating temperature range °C
6 to 200	6.4	1220 X 610	0.046	-184°C to +180°C (Intermittent up to 230°C)

Tolerances: Thickness: +/- 1.5mm; Dimensions: +/- 5mm; Density: +/- 10%

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

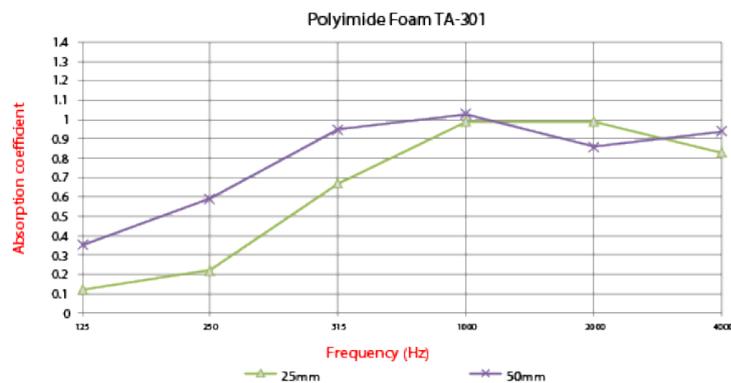
## MATERIAL PROPERTIES

Test method	Property	Description	Results
ASTM D 3574, Test C	50% Compression Force Deflection		>8 kPa
ASTM C 421	Tumbling Friability Mass loss after 20mins.		<2%
ASTM D 3574, Test J	Steam Autoclave Aging Tensile strength retained		>80%
	Change in weight and dimensions		<5%
ASTM D 3574, test E after 1000 hours at 204°C (400°F)	Dry Oven Aging Tensile strength retained		> 60%
	Change in volume		< 2%
ASTM C 1304	Odour emission		Pass
ASTM C 1338	Fungi Resistance		Pass
ASTM E 662	Flaming test condition	Smoke obscuration index	4
	Non-flaming test condition		2
ASTM C 1139	Time to flashover	Quarter-scale room fire test	N/A No flashover
	Maximum ceiling temperature	Maximum temperature achieved during the test if < 600°C	265°C
	Maximum doorway temperature	Maximum temperature achieved during the test if < 500°C	147°C
Boeing BSS 7239, flaming mode	CO	Toxicity of effluents during combustion	10 ppm
	HCN		<2 ppm
	HF		<1.5ppm
	HCL		1 ppm
	HBr		<1 ppm
	SO <sub>2</sub>		<1 ppm
NO <sub>x</sub>	<2 ppm		
IMO FTP (Resolution MSC.40(64) and MSC.90(71) Annex 1 Part 10	Heat release rate, smoke production, spread of flame, criteria of no flaming drops or debris formed	ISO 9705 Full-scale room test for high-speed craft	All criteria met

## ACOUSTIC PERFORMANCE

Frequency (Hz)	25 mm	50 mm
125	0.12	0.35
200	0.22	0.59
315	0.67	0.95
1000	0.99	1.03
2000	0.99	0.86
4000	0.83	0.94
NRC	0.70	0.85

(Tested to ASTM C423 and E 795, Type A Mounting)



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 or mechanical engineer on data presented by the manufacturer. Due to the wide variety of individual projects, Pyrotek NC 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 [www.pyroteknc.com/disclaimer](http://www.pyroteknc.com/disclaimer).

