

SORBERMIDE™ T

high performance ultralight thermal insulation polyimide foam

Sorbermide™ T 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.

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 off-gassing/outgassing properties, Sorbermide foam can be used in high-temperature environments. The foam retains its flexibility and mechanical properties at cryogenic temperatures and operates over a wide temperature range from -184°C to $+180^{\circ}\text{C}$, that would degrade most other foams. Due to these properties, it can be used as expansion joints for cryogenic tanks, pipelines and wind tunnels or as insulation in ovens and other high temperature processes.

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™ T 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, patrol vessels
- Commercial Marine - high speed yachts, ferries
- Military armoured vehicles, personnel carriers
- Railway Cars and passenger locomotives
- Aircraft
- Mining vehicles
- Automotive engine bays, cabin and cavity linings
- High temperature environments, insulation in ovens
- Ducting, duct and piping insulation
- 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
- Available as Type I unfaced thermal and acoustic absorptive panel
- Extremely light weight and flexible
- Outstanding thermal and acoustic properties
- High fire resistant with low smoke and flame properties
- Very low outgassing and no ozone-depleting substances
- Retains flexibility and dimensional stability over a wide temperature range
- Non-fibrous -easy to handle. No health hazards
- Easy to machine or profile cut, adhere or mechanically fasten into position
- Available thicknesses ranging from 6 to 200mm
- Can be faced with U.S. Mil Spec DOD-I-24688 Type II- Class 1, 3, 4 and 5 coverings
- Can be laminated to other insulation materials to form composites



PRODUCT SPECIFICATIONS

Standard thickness (mm)	Density (kg/m ³)	Sheet size* (mm x mm)	Thermal conductivity (w/mk)	Operating temperature range °C
6 to 200	6.4	1220 X 610	0.046 (Certificate No. DI0447/DU01)	-184°C to +180°C (Intermittent up to 230°C)

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

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MATERIAL PROPERTIES

Test method	Property		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	
Test method	Index	Results	Description	
ASTM E 662	Flaming test condition	4	Smoke obscuration index	
	Non-flaming test condition	2		
ASTM C 1139	Time to flashover	N/A No flashover	Quarter-scale room fire test	
	Maximum ceiling temperature	265°C	Maximum temperature achieved during the test if < 600°C	
	Maximum doorway temperature	147°C	Maximum temperature achieved during the test if < 500°C	
Boeing BSS 7239, flaming mode	CO	10 ppm	Toxicity of effluents during combustion	
	HCN	<2 ppm		
	HF	<1.5ppm		
	HCL	1 ppm		
	HBr	<1 ppm		
	SO ₂	<1 ppm		
NO _x	<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		All criteria met	ISO 9705 Full-scale room test for high-speed craft

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 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.

