

ThermaSmart® Marine 2.0 Black Tube

Thermal Insulation by Thermaflex®

Thermal halogen free tube insulation product made of direct extruded, closed-cell high quality polyolefin foam with aluminum black foil

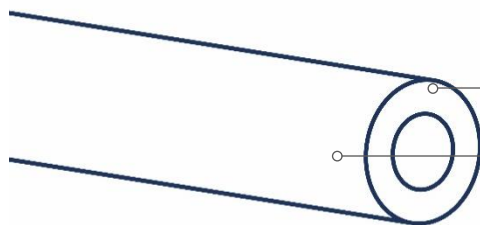


Benefits

- Consistent performance with aluminum vapor barrier
- Excellent fire rating
- High emission factor
- Halogen Free product

Applications

- Airconditioning, cooling and refrigeration
- Indoor and outdoor installation – UV protective layer
- Pipe systems, chillers, fan & coils, air handlers and tanks



Design

Polyolefin foam
Robust & high quality insulation

Aluminum black foil
Vapor barrier & mechanical strength



Disclaimer

All recommendations and information provided on this data sheet are based on our knowledge and experience. Product specifications are intended as guidelines. Since conditions of service are beyond our control, users must satisfy themselves that products are suitable for the intended use. No guarantee or warranty is given or implied or that any use of products will not infringe rights belonging to other parties. We reserve the right to change product design and properties without notification.



Technical Properties

Properties	Units SI	Values	Testing method
Physical properties			
Dimensional tolerances	-	Coherent	EN 14313
Density (foam)	kg/m ³	≤ 45	-
Foam structure	-	Fine, closed-cells	-
Color	-	Foam: dark grey Aluminum layer: black	-
Thermal properties			
Service temperature range	°C	-80 to +95	EN 14706
Maximum service temperature	°C	+95	EN 14707
Thermal conductivity (λ)	W/m·K	0.038 @ 40°C	EN 12664
Fire properties			
Fire rating	-	Pass Pass	IMO 2010 FTP Code Annex 1 Part 5 Part 2 (not required TA/MED)
Approvals	-	-	Lloyds Register Bureau Veritas DNV-GL Rina
Water resistance properties			
Water vapor diffusion	μ	> 10.000	EN 13469
Water absorption	kg/m ²	0.05	EN 1609

Availability

- Standard product length is 1m (96-102cm) in carton boxes (105x60x40cm)

Carrier Pipe Ø max. [mm]	Tube Insulation Ø [mm]	Carrier Pipe Ø max. [mm]	Tube Insulation Ø [mm]	Insulation Wall Thickness [mm]
12	13.0-14.5	48	50.0-52.0	13 (12-14)
15	16.0-17.5	50	52.0-54.0	19 (18-20)
18	19.0-20.5	54	56.0-58.0	25 (24-26)
20	21.0-22.5	60	62.0-64.0	30 (29-31)
22	23.0-24.5	63	65.0-67.5	
25	26.0-27.5	70	72.0-74.0	
28	29.0-30.5	76	77.0-79.5	
32	33.0-35.0	89	91.5-94.5	
35	36.0-38.0	102	105.0-108.0	
40	42.0-43.5	108	111.5-114.0	
42	44.0-46.0	114	117.0-120.0	

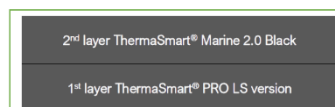
Above 30 till 50 mm multi-layer application

Application thickness 50 mm

For insulation thicknesses above 30 mm the product will be delivered in two layers

- Applications may requires larger thickness which can and should be done in 2 layers:

1st layer ThermaSmart® PRO LS version
2nd layer ThermaSmart® Marine 2.0 Black



- Combinations of all wall thicknesses from the range can be used for this with the remark that the total wall thickness doesn't exceed the maximum allowed 50 mm
- After installing the 2nd layer of ThermaSmart® Marine 2.0 Black, all seams longitudinally as well as front side connections must be covered with self-adhesive ThermaSmart® Marine 2.0 Black Tape with a minimum width of 50 mm