

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

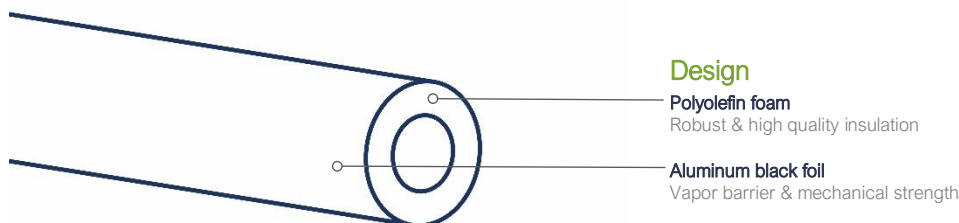


Benefits

- 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



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	

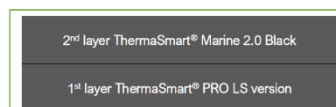
Above 30 till 50 mm multi-layer application

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