

ThermaSmart® PRO Tube

Thermal insulation by Thermaflex

Fully recyclable, thermal insulation foam, direct-extruded, closed-cell, made from high-quality polyolefins.

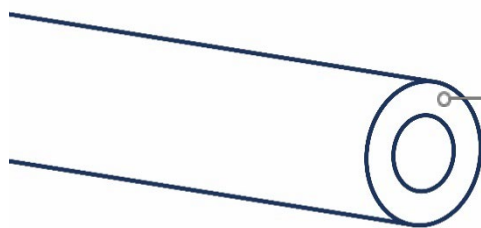


Benefits

- Condensation-free, closed-cell barrier prevents moisture damage.
- Excellent fire and smoke classification meets European standards.
- Superior durability, shock-absorbing, crack-resistant material withstands compression.
- Homogeneous welded connections create airtight, vapour-tight joints.
- Low CUI risk protects equipment, reduces maintenance costs, and extends system lifespan significantly.
- Gain points for Green building programme - Cradle to Cradle Certified® Bronze, EPD and REACH compliant.

Applications

- All HVAC-R systems: heating, cooling, air conditioning, and refrigeration.



Design

Thermoplastic-polyolefin foam
durable insulation material



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 the 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	kg/m ³	18 - 40	-
Structure	-	Fine, closed cells*	-
Colour	-	Anthracite**	-
Thermal properties			
Service temperature range	°C	-80 to +95	-
Maximum service temperature	°C	+95	EN 14707, EN 14313
Thermal conductivity (λ)	W/m·K	0.038 @ 40°C 0.034 @ 0°C	EN ISO 8497, EN 12667
Fire properties			
SBI classification wall thickness 9 – 25 mm wall thickness 30 mm	-	BL-s1, d0 DL-s2, d0	EN 13501-1
Flammability of Plastic materials	-	HF-1	UL94
Water resistance properties			
Water vapour diffusion	μ	$\geq 10,000$	EN 13469, EN 12086
Water absorption	-	WS 005	EN 13472

*Cell size may vary.

**Colour may vary.



Availability

- Standard product length is 2 m (198-204 cm) in carton boxes (205x60x40 cm).
- Tubes non-slit.



Tube Insulation							
Service pipe ø max. [mm]	Service pipe ø max. [inch]	ID copper / CTS [inch]	ID iron, PVC, IPS [inch]	Tube insulation ø [mm]	Insulation wall thickness [mm]		
					9 (7.5-10.5)	13 (11.0-15.0)	19 (16.5-21.5)
6				7.0-10.0	3004-009006-000	-	-
8				9.0-12.0	3004-009008-000	3004-013008-000	-
10	3/8"	1/4"	1/8"	11.0-14.0	3004-009010-000	3004-013010-000	3004-019010-000
12	1/2"	3/8"		13.0-16.0	3004-009012-000	3004-013012-000	3004-019012-000
15	5/8"	1/2"	1/4"	16.0-19.0	3004-009015-000	3004-013015-000	3004-019015-000
18	3/4"	5/8"	3/8"	19.0-22.0	3004-009018-000	3004-013018-000	3004-019018-000
20				21.0-24.0	3004-009020-000	3004-013020-000	3004-019020-000
22	7/8"	3/4"	1/2"	23.0-26.0	3004-009022-000	3004-013022-000	3004-019022-000
25				26.0-29.0	3004-009025-000	3004-013025-000	3004-019025-000
28	1-1/8"	1"	3/4"	29.0-32.0	3004-009028-000	3004-013028-000	3004-019028-000
32				33.0-36.0	3004-009032-000	3004-013032-000	3004-019032-000
35	1-3/8"	1-1/4"	1"	36.0-39.0	3004-009035-000	3004-013035-000	3004-019035-000
40				42.0-46.0	3004-009040-000	3004-013040-000	3004-019040-000
42	1-5/8"	1-1/2"	1-1/4"	44.0-48.0	3004-009042-000	3004-013042-000	3004-019042-000
48	1-1/2"	1-3/8"	1-1/2"	50.0-54.0	3004-009048-000	3004-013048-000	3004-019048-000
50				52.0-56.0	3004-009050-000	3004-013050-000	3004-019050-000
54	2-1/8"	2"		56.0-60.0	3004-009054-000	3004-013054-000	3004-019054-000
57				59.0-63.0	3004-009057-000	3004-013057-000	3004-019057-000
60	2"		2"	62.0-66.0	3004-009060-000	3004-013060-000	3004-019060-000
63				65.0-69.0	3004-009063-000	3004-013063-000	3004-019063-000
70	2-5/8"	2-1/2"		72.0-76.0	3004-009070-000	3004-013070-000	3004-019070-000
76	2-1/2"		2-1/2"	78.0-82.0	3004-009076-000	3004-013076-000	3004-019076-000
80	3-1/8"	3"		82.0-86.0		3004-013080-000	3004-019080-000
89	3"	3-1/2"	3"	91.0-95.0	-	3004-013089-000	3004-019089-000
102	4-1/8"	4"	3-1/2"	105.0-110.0	-	3004-013102-000	3004-019102-000
108				111.0-116.0	-	3004-013108-000	3004-019108-000
114	4"	4-1/2"	4"	117.0-122.0	-	3004-013114-000	3004-019114-000



Tube Insulation						
Service pipe Ø max. [mm]	Service pipe Ø max. [inch]	ID copper / CTS [inch]	ID iron, PVC, IPS [inch]	Tube insulation Ø [mm]	Insulation wall thickness [mm]	
					25 (22.5-27.5)	30 (27.5-32.5)
6	-	-	-	7.0-10.0	-	-
8	-	-	-	9.0-12.0	-	-
10	3/8"	1/4"	1/8"	11.0-14.0	3004-025010-000	-
12	1/2"	3/8"	-	13.0-16.0	3004-025012-000	3004-030012-000
15	5/8"	1/2"	1/4"	16.0-19.0	3004-025015-000	3004-030015-000
18	3/4"	5/8"	3/8"	19.0-22.0	3004-025018-000	3004-030018-000
20	-	-	-	21.0-24.0	3004-025020-000	3004-030020-000
22	7/8"	3/4"	1/2"	23.0-26.0	3004-025022-000	3004-030022-000
25	-	-	-	26.0-29.0	3004-025025-000	3004-030025-000
28	1-1/8"	1"	3/4"	29.0-32.0	3004-025028-000	3004-030028-000
32	-	-	-	33.0-36.0	3004-025032-000	3004-030032-000
35	1-3/8"	1-1/4"	1"	36.0-39.0	3004-025035-000	3004-030035-000
40	-	-	-	42.0-46.0	3004-025040-000	3004-030040-000
42	1-5/8"	1-1/2"	1-1/4"	44.0-48.0	3004-025042-000	3004-030042-000
48	1-1/2"	1-3/8"	1-1/2"	50.0-54.0	3004-025048-000	3004-030048-000
50	-	-	-	52.0-56.0	3004-025050-000	3004-030050-000
54	2-1/8"	2"	-	56.0-60.0	3004-025054-000	3004-030054-000
57	-	-	-	59.0-63.0	3004-025057-000	3004-030057-000
60	2"	-	2"	62.0-66.0	3004-025060-000	3004-030060-000
63	-	-	-	65.0-69.0	3004-025063-000	3004-030063-000
70	2-5/8"	2-1/2"	-	72.0-76.0	3004-025070-000	3004-030070-000
76	2-1/2"	-	2-1/2"	78.0-82.0	3004-025076-000	3004-030076-000
80	3-1/8"	3"	-	82.0-86.0	3004-025080-000	3004-030080-000
89	3"	3-1/2"	3"	91.0-95.0	3004-025089-000	3004-030089-000
102	4-1/8"	4"	3-1/2"	105.0-110.0	3004-025102-000	3004-030102-000
108	-	-	-	111.0-116.0	3004-025108-000	3004-030108-000
114	4"	4-1/2"	4"	117.0-122.0	3004-025114-000	3004-030114-000

- In coils up to Ø28 mm and wall thickness 6 - 13 mm.
- In carton boxes (61x61x25 cm).



Tube insulation coil							
Service pipe Ø max. [mm]	Service pipe Ø max. [inch]	ID copper / CTS [inch]	ID iron, PVC, IPS [inch]	Tube insulation Ø [mm]	Insulation wall thickness [mm]		
					6 (5.0-7.0)	9 (7.5-10.5)	13 (11.0-15.0)
6	-	-	-	7.0-10.0	3104-006006-000	-	-
8	-	-	-	9.0-12.0	3104-006008-000	3104-009008-000	3104-013008-000
10	3/8"	3/8"	1/8"	11.0-14.0	3104-006010-000	3104-009010-000	3104-013010-000
12	1/2"	1/2"	-	13.0-16.0	3104-006012-000	3104-009012-000	3104-013012-000
15	5/8"	5/8"	1/4"	16.0-19.0	3104-006015-000	3104-009015-000	3104-013015-000
18	3/4"	3/4"	3/8"	19.0-22.0	3104-006018-000	3104-009018-000	3104-013018-000
22	7/8"	7/8"	1/2"	23.0-26.0	3104-006022-000	3104-009022-000	3104-013022-000
28	1-1/8"	1-1/8"	3/4"	29.0-32.0	3104-006028-000	3104-009028-000	3104-013028-000



- Prefabricated parts.



2-elements Elbow							
Service pipe Ø max. [mm]	Service pipe Ø max. [inch]	ID copper / CTS [inch]	ID iron, PVC, IPS [inch]	Tube insulation Ø [mm]	Insulation wall thickness [mm]		
					9 (7.5-10.5)	13 (11.0-15.0)	19 (16.5.0-21.5)
8	-	-	-	9.0-12.0	-	3504-013008-001	-
10	3/8"	1/4"	1/8"	11.0-14.0	-	3504-013010-001	-
12	1/2"	3/8"	-	13.0-16.0	-	3504-013012-001	-
15	5/8"	1/2"	1/4"	16.0-19.0	3504-009015-001	3504-013015-001	-
18	3/4"	5/8"	3/8"	19.0-22.0	3504-009018-001	3504-013018-001	-
20	-	-	-	21.0-24.0	3504-009020-001	3504-013020-001	-
22	7/8"	3/4"	1/2"	23.0-26.0	3504-009022-001	3504-013022-001	3504-019022-001
25	-	-	-	26.0-29.0	3504-009025-001	3504-013025-001	-
28	1-1/8"	1"	3/4"	29.0-32.0	3504-009028-001	3504-013028-001	3504-019028-001
32	-	-	-	33.0-36.0	-	3504-013032-001	-
35	1-3/8"	1-1/4"	1"	36.0-39.0	3504-009035-001	3504-013035-001	3504-019035-001
42	1-5/8"	1-1/2"	1-1/4"	44.0-48.0	3504-009042-001	3504-013042-001	3504-019042-001
48	1-1/2"	1-3/8"	1-1/2"	50.0-54.0	3504-009048-001	3504-013048-001	3504-019048-001
54	2-1/8"	2"	-	56.0-60.0	3504-009054-001	3504-013054-001	3504-019054-001
60	2"	-	2"	62.0-66.0	3504-009060-001	3504-013060-001	3504-019060-001
63	-	-	-	65.0-69.0	3504-009063-001	3504-013063-001	3504-019063-001
76	2-1/2"	-	2-1/2"	78.0-82.0	3504-009076-001	3504-013076-001	-
89	3"	3-1/2"	3"	91.0-95.0	-	3504-013089-001	-
108	-	-	-	111.0-116.0	-	3504-013108-001	-
114	4"	4-1/2"	4"	117.0-122.0	-	3504-013114-001	-



3-elements Elbow							
Service pipe Ø max. [mm]	Service pipe Ø max. [inch]	ID copper / CTS [inch]	ID iron, PVC, IPS [inch]	Tube insulation Ø [mm]	Insulation wall thickness [mm]		
					9 (7.5-10.5)	13 (11.0-15.0)	19 (16.5-21.5)
15	5/8"	1/2"	1/4"	16.0-19.0	3504-009015-031	3504-013015-031	-
18	3/4"	5/8"	3/8"	19.0-22.0	3504-009018-031	3504-013018-031	-
22	7/8"	3/4"	1/2"	23.0-26.0	3504-009022-031	3504-013022-031	3504-019022-031
28	1-1/8"	1"	3/4"	29.0-32.0	3504-009028-031	3504-013028-031	3504-019028-031
35	1-3/8"	1-1/4"	1"	36.0-39.0	-	3504-013035-031	3504-019035-031
42	1-5/8"	1-1/2"	1-1/4"	44.0-48.0	-	3504-013042-031	3504-019042-031
48	1-1/2"	1-3/8"	1-1/2"	50.0-54.0	3504-009048-031	3504-013048-031	3504-019048-031
54	2-1/8"	2"	-	56.0-60.0	-	3504-013054-031	3504-019054-031
60	2"	-	2"	62.0-66.0	3504-009060-031	3504-013060-031	3504-019060-031
63	-	-	-	65.0-69.0	3504-009063-031	3504-013063-031	3504-019063-031



4-Elements Elbow							
Service pipe Ø max. [mm]	Service pipe Ø max. [inch]	ID copper / CTS [inch]	ID iron, PVC, IPS [inch]	Tube insulation Ø [mm]	Insulation wall thickness [mm]		
					9 (7.5-10.5)	13 (11.0-15.0)	19 (16.5-21.5)
8	-	-	-	9.0-12.0	-	3504-013008-041	-
10	3/8"	1/4"	1/8"	11.0-14.0	-	3504-013010-041	-
12	1/2"	3/8"	-	13.0-16.0	-	3504-013012-041	-
15	5/8"	1/2"	1/4"	16.0-19.0	3504-009015-041	3504-013015-041	3504-019015-041
18	3/4"	5/8"	3/8"	19.0-22.00	3504-009018-041	3504-013018-041	3504-019018-041
20	-	-	-	21.0-24.0	3504-009020-041	3504-013020-041	-
22	7/8"	3/4"	1/2"	23.0-26.0	3504-009022-041	3504-013022-041	3504-019022-041
25	-	-	-	26.0-29.0	3504-009025-041	3504-013025-041	-
28	1-1/8"	1"	3/4"	29.0-32.0	3504-009028-041	3504-013028-041	3504-019028-041
32	-	-	-	33.0-36.0	-	3504-013032-041	-
35	1-3/8"	1-1/4"	1"	36.0-39.0	3504-009035-041	3504-013035-041	3504-019035-041
42	1-5/8"	1-1/2"	1-1/4"	44.0-48.0	3504-009042-041	3504-013042-041	3504-019042-041
48	1-1/2"	1-3/8"	1-1/2"	50.0-54.0	3504-009048-041	3504-013048-041	3504-019048-041
54	2-1/8"	2"	-	56.0-60.0	3504-009054-041	3504-013054-041	3504-019054-041
60	2"	-	2"	62.0-66.0	3504-009060-041	3504-013060-041	3504-019060-041
63	-	-	-	65.0-69.0	3504-009063-041	3504-013063-041	3504-019063-041
70	2-5/8"	2-1/2"	-	72.0-76.0	-	-	3504-019070-041
76	2-1/2"	-	2-1/2"	78.0-84.0	3504-009076-041	3504-013076-041	-
89	3"	3-1/2"	3"	91.0-95.0	-	3504-013089-041	3504-019089-041
108	-	-	-	111.0-116.0	-	3504-013108-041	-
114	4"	4-1/2"	4"	117.0-122.0	-	3504-013114-041	-

Service pipe Ø max. [mm]	Service pipe Ø max. [inch]	ID copper / CTS [inch]	ID iron, PVC, IPS [inch]	Tube insulation Ø [mm]	Insulation wall thickness [mm]	
					25 (22.5-27.5)	30 (27.5-32.5)
28	1-1/8"	1"	3/4"	29.0-32.0	-	3504-030028-041
35	1-3/8"	1-1/4"	1"	37.0-39.0	-	3504-030035-041
54	2-1/8"	2"	-	56.0-60.0	3504-025054-041	-
60	2"	-	2"	62.0-66.0	3504-025060-041	-
76	2-1/2"	-	2-1/2"	78.0-84.0	3504-025076-041	-
108	-	-	-	111.0-116.0	3504-025108-041	-
114	4"	4-1/2"	4"	117.0-122.0	-	3504-030114-041



T-pieces							
Service pipe Ø max. [mm]	Service pipe Ø max. [inch]	ID copper / CTS [inch]	ID iron, PVC, IPS [inch]	Tube insulation Ø [mm]	Insulation wall thickness [mm]		
					9 (7.5-10.5)	13 (11.0-15.0)	19 (16.5-21.5)
8	-	-	-	9.0-12.0	-	3504-013008-301	-
10	3/8"	1/4"	1/8"	11.0-14.0	-	3504-013010-301	-
12	1/2"	3/8"	-	13.0-16.0	-	3504-013012-301	-
15	5/8"	1/2"	1/4"	16.0-19.0	3504-009015-301	3504-013015-301	3504-019015-301
18	3/4"	5/8"	3/8"	19.0-22.0	3504-009018-301	3504-013018-301	3504-019018-301
20	-	-	-	21.0-24.0	3504-009020-301	3504-013020-301	-
22	7/8"	3/4"	1/2"	23.0-26.0	3504-009022-301	3504-013022-301	3504-019022-301
25	-	-	-	26.0-29.0	3504-009025-301	3504-013025-301	-
28	1-1/8"	1"	3/4"	29.0-32.0	3504-009028-301	3504-013028-301	3504-019028-301
32	-	-	-	33.0-36.0	-	3504-013032-301	-
35	1-3/8"	1-1/4"	1"	36.0-39.0	3504-009035-301	3504-013035-301	3504-019035-301
42	1-5/8"	1-1/2"	1-1/4"	44.0-48.0	3504-009042-301	3504-013042-301	3504-019042-301
48	1-1/2"	1-3/8"	1-1/2"	50.0-54.0	3504-009048-301	3504-013048-301	3504-019048-301
54	2-1/8"	2"	-	56.0-60.0	3504-009054-301	3504-013054-301	3504-019054-301
60	2"	-	2"	62.0-66.0	3504-009060-301	3504-013060-301	3504-019060-301
63	-	-	-	65.0-69.0	3504-009063-301	3504-013063-301	3504-019063-301
70	2-5/8"	2-1/2"	-	72.0-76.0	-	-	3504-019070-301
76	2-1/2"	-	2-1/2"	78.0-84.0	3504-009076-301	3504-013076-301	-
89	3"	3-1/2"	3"	91.0-95.0	-	3504-013089-301	3504-019089-301
108	-	-	-	111.0-116.0	-	3504-013108-301	-
114	4"	4-1/2"	4"	117.0-122.0	-	3504-013114-301	-

Service pipe Ø max. [mm]	Service pipe Ø max. [inch]	ID copper / CTS [inch]	ID iron, PVC, IPS [inch]	Tube insulation Ø [mm]	Insulation wall thickness [mm]	
					25 (22.5-27.5)	30 (27.5-32.5)
28	1-1/8"	1"	3/4"	29.0-32.0	-	3504-030028-301
35	1-3/8"	1-1/4"	1"	36.0-39.0	-	3504-030035-301
54	2-1/8"	2"	-	56.0-60.0	3504-025054-301	-
60	2"	-	2"	62.0-66.0	3504-025060-301	-
76	2-1/2"	-	2-1/2"	78.0-82.0	3504-025076-301	-
89	3"	3-1/2"	3"	91.0-95.0	3504-025089-301	-
108	-	-	-	111.0-116.0	3504-025108-301	-
114	4"	4-1/2"	4"	117.0-122.0	3504-025114-301	3504-030114-301