

Product Data Sheet

ThermaSmart® PRO

Insulating the future, from cradle to cradle

ThermaSmart®PRO, a thermoplastic elastomeric insulation material (TPE). Tested and trusted for all HVAC-R applications, ThermaSmart®PRO is fully recyclable and offers an outstanding insulating performance over the entire service lifetime with excellent fire retardant properties. The closed cells contain an integrated anti-water vapor transmission, limiting that water vapor diffuses in to the insulation material. ThermaSmart®PRO offers superior mechanical strength, yet in the rare case the skin does get damaged, the closed cell structure retains its protective properties. ThermaSmart®PRO complies to RoHS (Restriction of Hazardous Substances) and has very low VOC (Volatile Organic Compounds). EPD certified (Environmental Product Declaration) and Cradle to Cradle Certified™ Bronze, ThermaSmart®PRO supports almost all green building programs worldwide.

Applications

- Refrigeration
- Cooling and chilled water
- Ventilation
- Hot water
- Heating
- Air Conditioning

Fire and smoke

- Excellent flame extinguishing properties
- Low smoke development
- Low smoke toxicity
- No flaming droplets

Health and hygiene

- Future-proof product design: healthy, risk-free raw materials and production process
- Full conformity with health and safety regulations: safe and non-toxic
- Prevents bacteria formation during entire service lifetime

Insulation

- Excellent thermal insulation properties
- Reliable insulation performance over entire service lifetime
- Longer and more reliable performance of HVAC-R equipment

Water

- Integrated water vapor barrier limits water vapor diffusion, also ensures performance after wear and tear
- No foil, cladding or covers needed to secure water resistance (for outdoor application, protection is advised)

Durability

- Wear and tear resistant during installation and operation, even without cladding or casing
- Superb mechanical strength ensures long and maintenance-free service lifetime of HVAC-R equipment
- Long track record of excellent resistance in the toughest conditions (insulation of < 0 °C lines in hot and humid climates near coastal areas – salty air)
- For the latest customer case studies, see <https://thermaflex.com/en/case-studies>

Sustainability

- Optimally compliant to LEED, BREEAM and other green building standards
- Circular, and 100% recyclable. Allows material take-back through our Reclaim program

Quality

All Thermaflex production facilities are certified in accordance with the internationally accepted standard ISO 9001.

<https://thermaflex.com/en/knowledge-center/organizational-certificates>

Environment and recycling

Thermaflex group of companies considers thermoplastic elastomers to be an environmentally friendly material due to its recyclability. Packaging used is FSC approved only and considered to have a low impact on the environment. Recycling of packaging and our products is supported by Thermaflex Isolatie B.V. whenever ecological and social benefits are achieved and where a social infrastructure for selective collecting and sorting of packaging and our products is fostered. Though we would not advise, but whenever 'thermal recycling' of packaging and our products (i.e. incineration with energy recovery) is carried out, thermoplastic elastomers, with its fairly simple molecular structure and low amount of additives, is considered to be a trouble-free fuel.

Health, safety regulations

Review the Safety Data Sheet (SDS) and product labels to determine health hazards, usage instructions and precautions. Additional specific information can be requested via your local Sales Office.

<https://thermaflex.com/en/knowledge-center/safety-data-sheets>

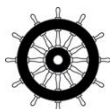
Declaration of performance

Actual document available on:

<https://thermaflex.com/en/knowledge-center/declaration-of-performance>



Typical data – ThermaSmart [®] PRO tube and sheet insulation			
Properties	Units SI	Values	Testing method
Physical properties			
Density	Kg/m ³	21 ≤ 40	ISO 845
Structure	-	Fine, closed-cells	-
Color	-	Dark grey	-
Odor	-	Neutral	-
Smoke & Toxicity	-	Pass	IMO Resolution MSC 61(67)
Thermal properties			
Lambda (tube)	W/m.K	0,035 @ 0°C 0,035 @ 10°C 0,036 @ 20°C 0,038 @ 40°C 0,039 @ 50°C	EN ISO 8497
Lambda (sheet)	W/m.K	0,035 @ 0°C 0,036 @ 10°C 0,036 @ 20°C 0,038 @ 40°C 0,039 @ 50°C	EN 12664
Maximum service temperature	°C	+95 (-0.5%)	EN 14706
Lowest service temperature Deformation @ -80°C	°C m/m.K m/m.K m/m.K	-80 +0,0082 on length +0,0078 on width -0.0128 on thickness	EN 14313:2009+A1:2013, Annex B
Fire properties			
Single Burning Item [SBI] (tube)	-	B, s1, do	EN 13501
Single Burning Item [SBI] (sheet)	-	B, s2, do	EN 13501
British Standard Part 6 British Standard Part 7	FPI, I	Class 0 Class 1	BS 476 : Part 6, 1989 + A1 2009 BS 476 : Part 7, 1997
Water resistance properties			
Water vapor diffusion (tube)	μ	≥ 10.000	EN 13469
Water vapor diffusion (sheet)	μ	≥ 5.300	EN 12086
Water absorption (tube)	Kg/m ³	0,05 ≤ 0,1	EN 13472
Water absorption (sheet)	Kg/m ³	0,05	EN 1609



Tube: Cert. No.
0751-CPR-2-
004.0-02
Sheet: Cert. No.
1454-CPR-1019



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.

Revision date: [20.01.2017]

Taking care of energy and the environment

Thermasmart PRO Tubes												
Diameter of the pipe***					Wall Thickness E = 9 mm				Wall Thickness J = 13 mm			
Cu		Fe			Product code (NEW)*	Product code**	Code	meter/box	Product code (NEW)*	Product code**	Code	meter/box
DN	OD (mm)	Inches	DN	OD (mm)								
10	x	x	x	x	x	x	x	x	3000-013012-000 (020)	1813012 (B)	J-12	260
x	15,0	1/4	8	13,5	3000-009015-000 (020)	1809015 (B)	E-15	348	3000-013015-000 (020)	1813015 (B)	J-15	240
15	18,0	3/8	10	17,2	3000-009018-000 (020)	1809018 (B)	E-18	288	3000-013018-000 (020)	1813018 (B)	J-18	200
20	22,0	1/2	15	21,3	3000-009022-000 (020)	1809022 (B)	E-22	248	3000-013022-000 (020)	1813022 (B)	J-22	172
25	28,0	3/4	20	26,9	3000-009028-000 (020)	1809028 (B)	E-28	188	3000-013028-000 (020)	1813028 (B)	J-28	134
32	35,0	1	25	33,7	3000-009035-000 (020)	1809035 (B)	E-35	140	3000-013035-000 (020)	1813035 (B)	J-35	108
40	42,0	1 1/4	32	42,4	3000-009042-000 (020)	1809042 (B)	E-42	110	3000-013042-000 (020)	1813042 (B)	J-42	90
x	48,0	1 1/2	40	48,3	3000-009048-000 (020)	1809048 (B)	E-48	84	3000-013048-000 (020)	1813048 (B)	J-48	70
50	54,0	x	x	54,0	3000-009054-000 (020)	1809054 (B)	E-54	76	3000-013054-000 (020)	1813054 (B)	J-54	64
50	57,0	x	x	57,0	3000-009057-000 (020)	1809057 (B)	E-57	76	3000-013057-000 (020)	1813057 (B)	J-57	58
x	x	2	50	60,0	3000-009060-000 (020)	1809060 (B)	E-60	70	3000-013060-000 (020)	1813060 (B)	J-60	58
x	64,0	x	x	63,5	3000-009063-000 (020)	1809063 (B)	E-63	68	3000-013063-000 (020)	1813063 (B)	J-63	52
x	70,0	2 1/4	x	70,0	x	x	x	x	3000-013070-000 (020)	1813070 (B)	J-70	44
65	76,1	2 1/2	65	76,1	3000-009076-000 (020)	1809076 (B)	76	46	3000-013076-000 (020)	1813076 (B)	J-76	40
80	88,9	3	80	88,9	x	x	x	x	3000-013089-000 (020)	1813089 (B)	J-89	32
x	x	3 1/2	x	101,6	x	x	x	x	3000-013102-000 (020)	1813102 (B)	J-102	26
100	108,0	3 3/4	100	108,0	x	x	x	x	3000-013108-000 (020)	1813108 (B)	J-108	24
100	114,0	4	100	114,3	x	x	x	x	3000-013114-000 (020)	1813114 (B)	J-114	22

*) Index (NEW)

**) Index

xxxx-xxxxxx (020)

xxxxxxx (B)

also for Sanitary & Heating – pre-cut

also for Sanitary & Heating – pre-cut

Thermasmart PRO - Sheet															
Width	Wall Thickness = 7,5 mm			Wall Thickness = 10 mm			Wall Thickness = 13 mm			Wall Thickness = 19 mm			Wall Thickness = 25 mm		
	Product code	Unit	m ²	Product code	Unit	m ²	Product code	Unit	m ²	Product code	Unit	m ²	Product code	Unit	m ²
50	x	x	x	x	x	x	3200-013050-601	Plates	9	3200-019050-601	Plates	7	3200-025050-601	Plates	5
100	3200-007100-004	Roll	100	3200-010100-004	Roll	104	3200-013100-004	Roll	78	3200-019100-004	Roll	52	3200-025100-004	Roll	39
100	x	x	x	3200-010100-204	Short Roll	10	3200-013100-204	Short Rolls	8	3200-019100-204	Short Rolls	6	3200-025100-204	Short Roll	4

Variations upon request

Thermasmart PRO - In Coil																
Diameter of the pipe***					Wall Thickness C = 6 mm				Wall Thickness E = 9 mm				Wall thickness J = 13 mm			
Cu		Fe			Product code (NEW)	Product code	Code	meter/ box	Product code (NEW)	Product code	Code	meter/ box	Product code (NEW)	Product code	Code	meter/ box
DN	OD	Inches	DN	OD												
4	x	x	x	x	3100-006006-000	1806006SC	C-6	50	x	x	x	x	x	x	x	x
6	8	x	x	x	3100-006008-000	1806008SC	C-8	48	3100-009008-000	1809008SC	E-8	37	x	x	x	x
8	10,0	1/8	6	10,2	3100-006010-000	1806010SC	C-10	46	3100-009010-000	1809010SC	E-10	34	3100-013010-000	1813010SC	J-10	19
10	12,0	x	x	x	3100-006012-000	1806012SC	C-12	40	3100-009012-000	1809012SC	E-12	31	3100-013012-000	1813012SC	J-12	18
x	14,0	1/4	8	13,5	3100-006015-000	1806015SC	C-15	38	3100-009015-000	1809015SC	E-15	27	3100-013015-000	1813015SC	J-15	17
15	18,00	3/8	10	17,2	3100-006018-000	1806018SC	C-18	30	3100-009018-000	1809018SC	E-18	23	3100-013018-000	1813018SC	J-18	15
20	22,00	1/2	15	21,3	3100-006022-000	1806022SC	C-22	23	3100-009022-000	1809022SC	E-22	19	3100-013022-000	1813022SC	J-22	14
25	28,00	3/4	20	26,9	3100-006028-000	1806028SC	C-28	20	3100-009028-000	1809028SC	E-28	14	3100-013028-000	1813028SC	J-28	10

***) Tolerance according to: EN14313:2015

Authorized distributor in your area ESLAT AS

www.eslat.ee