

# T-FIT<sup>®</sup>

INSULATION



TUBES TECHNOLOGIES  
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## ISOLATION POUR SALLE BLANCHE



# T-FIT® Clean

# T-FIT® INSULATION

Fit to perform. Fit to last

## Product information

### Typical Values

T-FIT® Clean is manufactured from Zotefoams ZOTEK® F42 HT LS fine, closed cell foam, the only foam product to be specification tested to FM4910 Clean Room Materials Protocol. The values provided in this Product Information Sheet represent data gathered from random samples of our production of Zotek F42HTLS from which T-FIT Clean is produced and represent typical data. These are given to the best of our knowledge and should be considered as guidance only for selecting a suitable grade for a given application.



Property	Test Standard	Typical Value
<b>Material</b>		Manufactured from an FDA-compliant resin
<b>Service Temperature</b>	See Notes Below*	-80 °C to +160 °C (-112 °F to + 320 °F)
<b>Thermal Conductivity</b>		
Mean temperature of 0 °C (32 °F)	ISO 8301	0.0314 W/m.K (0.22 Btu.in/h.ft <sup>2</sup> °F)
Mean temperature of 25 °C (77 °F)		0.0347 W/m.K (0.24 Btu.in/h.ft <sup>2</sup> °F)
Mean temperature of 80 °C (176 °F)		0.0434 W/m.K (0.30 Btu.in/h.ft <sup>2</sup> °F)
<b>Fire Certification</b>		
Euroclass	EN13501-1	B - s1, d0
UL723 / ASTM E84	Material Thickness	6.25mm (1/4")
	Flaming Spread Index	0
	Smoke Developed Index	0
AS 1530	Gauge mm	Ignitability
	5	0
	25	0
		Spread of flame
		0
		Heat Evolved
		0
		Smoke Dev
		1
		0/1
<b>Water Vapour Transmission</b>	ISO 1663	6500, μ Value
<b>Outgassing</b>	VDI 2083-P17	17.95 μg/g
ISO-AMC class	ISO 14644-8**	-10
<b>Fungus Resistance</b>	ASTM G21-15	Full test complete No signs after 28 days
<b>Leachable Ions</b>	ASTM C-871	Pass
<b>Factory Mutal 4910 Cleanroom Materials Flammability Test Protocol</b>		Specification Tested

\* These are extreme temperatures. For continuous use or advice on product specification with respect to condensation control or temperatures below -80°C, please contact your local T-FIT® representative. Report available on request. \*\* Based on independent testing and commentary, full report available on request

Product Code	Description: T-FIT Clean - ASME BPE	Insulation in	Sizing ID mm	Product
ZAFCK99930	ASME BPE 0.25" OD 6.35mm T-FIT Clean Insulating Straight 6.35mm THK	0.25"	6.35	Straight
ZAFCK06381	ASME BPE 0.375" OD 9.53mm T-FIT Clean Insulating Straight 6.35mm THK	0.375"	9.53	Straight
ZAFCK06382	ASME BPE 0.5" OD 12.70mm T-FIT Clean Insulating Straight 6.35mm THK	0.5"	12.70	Straight
ZAFCK06383	ASME BPE 0.75" OD 19.05mm T-FIT Clean Insulating Straight 6.35mm THK	0.75"	19.05	Straight
ZAFCK06384	ASME BPE 1.0" OD 25.40mm T-FIT Clean Insulating Straight 6.35mm THK	1.0"	25.40	Straight
ZAFCK06385	ASME BPE 1.5" OD 38.10mm T-FIT Clean Insulating Straight 6.35mm THK	1.5"	38.10	Straight
ZAFCK06386	ASME BPE 2.0" OD 50.8mm T-FIT Clean Insulating Straight 6.35mm THK	2.0"	50.80	Straight
ZAFCK06387	ASME BPE 2.5" OD 63.50mm T-FIT Clean Insulating Straight 6.35mm THK	2.5"	63.50	Straight
ZAFCK06388	ASME BPE 3.0" OD 76.20mm T-FIT Clean Insulating Straight 6.35mm THK	3.0"	76.20	Straight
ZAFCK06787	ASME BPE 3.5" OD 88.90mm T-FIT Clean Insulating Straight 6.35mm THK	3.5"	88.90	Straight
ZAFCK06522	ASME BPE 4.0" OD 101.6mm T-FIT Clean Insulating Straight 6.35mm THK	4.0"	101.60	Straight
ZAFCK99930-NT	ASME BPE 0.25" OD 6.35mm T-FIT Clean Insulating Straight 6.35mm THK(No Tape)	0.25"	6.35	Straight
ZAFCK06381-NT	ASME BPE 0.375" OD 9.53mm T-FIT Clean Insulating Straight 6.35mm THK(No Tape)	0.375"	9.53	Straight
ZAFCK06382-NT	ASME BPE 0.5" OD 12.70mm T-FIT Clean Insulating Straight 6.35mm THK(No Tape)	0.5"	12.70	Straight
ZAFCK06383-NT	ASME BPE 0.75" OD 19.05mm T-FIT Clean Insulating Straight 6.35mm THK(No Tape)	0.75"	19.05	Straight
ZAFCK06384-NT	ASME BPE 1.0" OD 25.40mm T-FIT Clean Insulating Straight 6.35mm THK(No Tape)	1.0"	25.40	Straight
ZAFCK06385-NT	ASME BPE 1.5" OD 38.10mm T-FIT Clean Insulating Straight 6.35mm THK(No Tape)	1.5"	38.10	Straight
ZAFCK06386-NT	ASME BPE 2.0" OD 50.8mm T-FIT Clean Insulating Straight 6.35mm THK(No Tape)	2.0"	50.80	Straight
ZAFCK06387-NT	ASME BPE 2.5" OD 63.50mm T-FIT Clean Insulating Straight 6.35mm THK(No Tape)	2.5"	63.50	Straight
ZAFCK06388-NT	ASME BPE 3.0" OD 76.20mm T-FIT Clean Insulating Straight 6.35mm THK(No Tape)	3.0"	76.20	Straight
ZAFCK06522-NT	ASME BPE 4.0" OD 101.60mm T-FIT Clean Insulating Straight 6.35mm THK(No Tape)	4.0"	101.60	Straight
ZAFCK05880	ASME BPE 0.375" OD 9.53mm T-FIT Clean Insulating Elbow 6.35mm THK	0.375"	9.53	Elbow
ZAFCK05814	ASME BPE 0.5" OD 12.70mm T-FIT Clean Insulating Elbow 6.35mm THK	0.5"	12.70	Elbow
ZAFCK05815	ASME BPE 0.75" OD 19.05mm T-FIT Clean Insulating Elbow 6.35mm THK	0.75"	19.05	Elbow
ZAFCK05816	ASME BPE 1.0" OD 25.40mm T-FIT Clean Insulating Elbow 6.35mm THK	1.0"	25.40	Elbow
ZAFCK05615	ASME BPE 1.5" OD 38.10mm T-FIT Clean Insulating Elbow 6.35mm THK	1.5"	38.10	Elbow
ZAFCK05616	ASME BPE 2.0" OD 50.80mm T-FIT Clean Insulating Elbow 6.35mm THK	2.0"	50.80	Elbow
ZAFCK05898	ASME BPE 2.5" OD 63.50mm T-FIT Clean Insulating Elbow 6.35mm THK	2.5"	63.50	Elbow
ZAFCK05899	ASME BPE 3.0" OD 76.20mm T-FIT Clean Insulating Elbow 6.35mm THK	3.0"	76.20	Elbow
ZAFCK06878	ASME BPE 3.5" OD 88.90mm T-FIT Clean Insulating Elbow 6.35mm THK	3.5"	88.90	Elbow
ZAFCK06523	ASME BPE 4.0" OD 101.6mm T-FIT Clean Insulating Elbow 6.35mm THK	4.0"	101.60	Elbow
ZAFCK05900	ASME BPE 0.375" OD 9.53mm T-FIT Clean Insulating Tee 6.35mm THK	0.375"	9.53	Tee
ZAFCK05743	ASME BPE 0.5" OD 12.70mm T-FIT Clean Insulating Tee 6.35mm THK	0.5"	12.70	Tee
ZAFCK05744	ASME BPE 0.75" OD 19.05mm T-FIT Clean Insulating Tee 6.35mm THK	0.75"	19.05	Tee
ZAFCK05745	ASME BPE 1.0" OD 25.40mm T-FIT Clean Insulating Tee 6.35mm THK	1.0"	25.40	Tee
ZAFCK05746	ASME BPE 1.5" OD 38.10mm T-FIT Clean Insulating Tee 6.35mm THK	1.5"	38.10	Tee
ZAFCK05747	ASME BPE 2.0" OD 50.80mm T-FIT Clean Insulating Tee 6.35mm THK	2.0"	50.80	Tee
ZAFCK05901	ASME BPE 2.5" OD 63.50mm T-FIT Clean Insulating Tee 6.35mm THK	2.5"	63.50	Tee
ZAFCK05902	ASME BPE 3.0" OD 76.20mm T-FIT Clean Insulating Tee 6.35mm THK	3.0"	76.20	Tee
ZAFCK06381-EU	ISO 1127 DN6 OD 10.2mm T-FIT Clean Insulating Straight 6.35mm THK	DN6	10.20	Straight
ZAFCK06382-EU	ISO 1127 DN8 OD 13.5mm T-FIT Clean Insulating Straight 6.35mm THK	DN8	13.50	Straight
ZAFCK06500	ISO 1127 DN10 OD 17.2mm T-FIT Clean Insulating Straight 6.35mm THK	DN10	17.20	Straight
ZAFCK06501	ISO 1127 DN15 OD 21.3mm T-FIT Clean Insulating Straight 6.35mm THK	DN15	21.30	Straight
ZAFCK06502	ISO 1127 DN20 OD 26.9mm T-FIT Clean Insulating Straight 6.35mm THK	DN20	26.90	Straight
ZAFCK06457	ISO 1127 DN25 OD 33.7mm T-FIT Clean Insulating Straight 6.35mm THK	DN25	33.70	Straight
ZAFCK06503	ISO 1127 DN32 OD 42.4mm T-FIT Clean Insulating Straight 6.35mm THK	DN32	42.40	Straight
ZAFCK06564	ISO 1127 DN40 OD 48.3mm T-FIT Clean Insulating Straight 6.35mm THK	DN40	48.30	Straight
ZAFCK06835	ISO 1127 DN50 OD 60.3mm T-FIT Clean Insulating Straight 6.35mm THK	DN50	60.30	Straight
ZAFCK06388-EU	ISO 1127 DN65 OD 76.1mm T-FIT Clean Insulating Straight 6.35mm THK	DN65	76.10	Straight

Product Code	Description: T-FIT Clean - ASME BPE	Insulation in	Sizing ID mm	Product
ZAFCK06525	ISO 1127 DN80 OD 88.9mm T-FIT Clean Insulating Straight 6.35mm THK	DN80	88.90	Straight
ZAFCK06381-EU-NT	ISO 1127 DN6 OD 10.2mm T-FIT Clean Insulating Straight 6.35mm THK(No Tape)	DN6	10.20	Straight
ZAFCK06382-EU-NT	ISO 1127 DN8 OD 13.5mm T-FIT Clean Insulating Straight 6.35mm THK(No Tape)	DN8	13.50	Straight
ZAFCK06500-NT	ISO 1127 DN10 OD 17.2mm T-FIT Clean Insulating Straight 6.35mm THK (No Tape)	DN10	17.20	Straight
ZAFCK06501-NT	ISO 1127 DN15 OD 21.3mm T-FIT Clean Insulating Straight 6.35mm THK(No Tape)	DN15	21.30	Straight
ZAFCK06502-NT	ISO 1127 DN20 OD 26.9mm T-FIT Clean Insulating Straight 6.35mm THK(No Tape)	DN20	26.90	Straight
ZAFCK06457-NT	ISO 1127 DN25 OD 33.7mm T-FIT Clean Insulating Straight 6.35mm THK(No Tape)	DN25	33.70	Straight
ZAFCK06503-NT	ISO 1127 DN32 OD 42.4mm T-FIT Clean Insulating Straight 6.35mm THK(No Tape)	DN32	42.40	Straight
ZAFCK06564-NT	ISO 1127 DN40 OD 48.3mm T-FIT Clean Insulating Straight 6.35mm THK(No Tape)	DN40	48.30	Straight
ZAFCK06835-NT	ISO 1127 DN50 OD 60.3mm T-FIT Clean Insulating Straight 6.35mm THK(No Tape)	DN50	60.30	Straight
ZAFCK06388-EU-NT	ISO 1127 DN65 OD 76.1mm T-FIT Clean Insulating Straight 6.35mm THK(No Tape)	DN65	76.10	Straight
ZAFCK06525-NT	ISO 1127 DN80 OD 88.9mm T-FIT Clean Insulating Straight 6.35mm THK(No Tape)	DN80	88.90	Straight
ZAFCK05880-EU	ISO 1127 DN6 OD 10.2mm T-FIT Clean Insulating Elbow 6.35mm THK	DN6	10.20	Elbow
ZAFCK05814-EU	ISO 1127 DN8 OD 13.5mm T-FIT Clean Insulating Elbow 6.35mm THK	DN8	13.50	Elbow
ZAFCK06512	ISO 1127 DN10 OD 17.2mm T-FIT Clean Insulating Elbow 6.35mm THK	DN10	17.20	Elbow
ZAFCK06513	ISO 1127 DN15 OD 21.3mm T-FIT Clean Insulating Elbow 6.35mm THK	DN15	21.30	Elbow
ZAFCK06582	ISO 1127 DN20 OD 26.9mm T-FIT Clean Insulating Elbow 6.35mm THK	DN20	26.90	Elbow
ZAFCK06515	ISO 1127 DN25 OD 33.7mm T-FIT Clean Insulating Elbow 6.35mm THK	DN25	33.70	Elbow
ZAFCK06516	ISO 1127 DN32 OD 42.4mm T-FIT Clean Insulating Elbow 6.35mm THK	DN32	42.40	Elbow
ZAFCK06517	ISO 1127 DN40 OD 48.3mm T-FIT Clean Insulating Elbow 6.35mm THK	DN40	48.30	Elbow
ZAFCK06518	ISO 1127 DN50 OD 60.3mm T-FIT Clean Insulating Elbow 6.35mm THK	DN50	60.30	Elbow
ZAFCK05899-EU	ISO 1127 DN65 OD 76.1mm T-FIT Clean Insulating Elbow 6.35mm THK	DN65	76.10	Elbow
ZAFCK06816	ISO1127 3.0"NB OD 88.90mm T-FIT Clean Insulating Elbow 6.35mm THK	DN80	88.90	Elbow
ZAFCK05900-EU	ISO 1127 DN6 OD 10.2mm T-FIT Clean Insulating Tee 6.35mm THK	DN6	10.20	Tee
ZAFCK05743-EU	ISO 1127 DN8 OD 13.5mm T-FIT Clean Insulating Tee 6.35mm THK	DN8	13.50	Tee
ZAFCK06506	ISO 1127 DN10 OD 17.2mm T-FIT Clean Insulating Tee 6.35mm THK	DN10	17.20	Tee
ZAFCK06507	ISO 1127 DN15 OD 21.3mm T-FIT Clean Insulating Tee 6.35mm THK	DN15	21.30	Tee
ZAFCK06583	ISO 1127 DN20 OD 26.9mm T-FIT Clean Insulating Tee 6.35mm THK	DN20	26.90	Tee
ZAFCK06508	ISO 1127 DN25 OD 33.7mm T-FIT Clean Insulating Tee 6.35mm THK	DN25	33.70	Tee
ZAFCK06509	ISO 1127 DN32 OD 42.4mm T-FIT Clean Insulating Tee 6.35mm THK	DN32	42.40	Tee
ZAFCK06510	ISO 1127 DN40 OD 48.3mm T-FIT Clean Insulating Tee 6.35mm THK	DN40	48.30	Tee
ZAFCK06511	ISO 1127 DN50 OD 60.3mm T-FIT Clean Insulating Tee 6.35mm THK	DN50	60.30	Tee
ZAFCK05902-EU	ISO 1127 DN65 OD 76.1mm T-FIT Clean Insulating Tee 6.35mm THK	DN65	76.10	Tee
AFCK06381-D	DIN 11850 DN8 OD 10.00mm T-FIT Clean Insulating Straight 6.35mm THK	DN8	10.00	Straight
ZAFCK06382-D	DIN 11850 DN10 OD 13.00mm T-FIT Clean Insulating Straight 6.35mm THK	DN10	13.00	Straight
ZAFCK06383-D	DIN 11850 DN15 OD 19.00mm T-FIT Clean Insulating Straight 6.35mm THK	DN15	19.00	Straight
ZAFCK06888	DIN 11850 DN20 OD 23.00mm T-FIT Clean Insulating Straight 6.35mm THK	DN20	23.00	Straight
ZAFCK06889	DIN 11850 DN25 OD 29.00mm T-FIT Clean Insulating Straight 6.35mm THK	DN25	29.00	Straight
ZAFCK06890	DIN 11850 DN32 OD 35.00mm T-FIT Clean Insulating Straight 6.35mm THK	DN32	35.00	Straight
ZAFCK06503-D	DIN 11850 DN40 OD 41.00mm T-FIT Clean Insulating Straight 6.35mm THK	DN40	41.00	Straight
ZAFCK06891	DIN 11850 DN50 OD 53.00mm T-FIT Clean Insulating Straight 6.35mm THK	DN50	53.00	Straight
ZAFCK06297	DIN 11850 DN65 OD 70.00mm T-FIT Clean Insulating Straight 6.35mm THK	DN65	70.00	Straight
ZAFCK06892	DIN 11850 DN80 OD 85.00mm T-FIT Clean Insulating Straight 6.35mm THK	DN80	85.00	Straight
ZAFCK06893	DIN 11850 DN100 OD 104.00mm T-FIT Clean Insulating Straight 6.35mm THK	DN100	104.00	Straight
ZAFCK06381-D-NT	DIN 11850 DN8 OD 10.00mm T-FIT Clean Insulating Straight 6.35mm THK (No Tape)	DN8	10.00	Straight
ZAFCK06382-D-NT	DIN 11850 DN10 OD 13.00mm T-FIT Clean Insulating Straight 6.35mm THK (No Tape)	DN10	13.00	Straight
ZAFCK06383-D-NT	DIN 11850 DN15 OD 19.00mm T-FIT Clean Insulating Straight 6.35mm THK (No Tape)	DN15	19.00	Straight
ZAFCK06888-NT	DIN 11850 DN20 OD 23.00mm T-FIT Clean Insulating Straight 6.35mm THK (No Tape)	DN20	23.00	Straight

Product Code	Description: T-FIT Clean - ASME BPE	Insulation in	Sizing ID mm	Product
ZAFCK06889-NT	DIN 11850 DN25 OD 29.00mm T-FIT Clean Insulating Straight 6.35mm THK (No Tape)	DN25	29.00	Straight
ZAFCK06890-NT	DIN 11850 DN32 OD 35.00mm T-FIT Clean Insulating Straight 6.35mm THK (No Tape)	DN32	35.00	Straight
ZAFCK06503-D-NT	DIN 11850 DN40 OD 41.00mm T-FIT Clean Insulating Straight 6.35mm THK (No Tape)	DN40	41.00	Straight
ZAFCK06891-NT	DIN 11850 DN50 OD 53.00mm T-FIT Clean Insulating Straight 6.35mm THK (No Tape)	DN50	53.00	Straight
ZAFCK06297-NT	DIN 11850 DN65 OD 70.00mm T-FIT Clean Insulating Straight 6.35mm THK (No Tape)	DN65	70.00	Straight
ZAFCK06892-NT	DIN 11850 DN80 OD 85.00mm T-FIT Clean Insulating Straight 6.35mm THK (No Tape)	DN80	85.00	Straight
ZAFCK05880-D	DIN 11850 DN8 OD 10.00mm T-FIT Clean Insulating Elbow 6.35mm THK	DN8	10.00	Elbow
ZAFCK05814-D	DIN 11850 DN10 OD 13.00mm T-FIT Clean Insulating Elbow 6.35mm THK	DN10	13.00	Elbow
ZAFCK05815-D	DIN 11850 DN15 OD 19.00mm T-FIT Clean Insulating Elbow 6.35mm THK	DN15	19.00	Elbow
ZAFCK06874	DIN 11850 DN20 OD 23.00mm T-FIT Clean Insulating Elbow 6.35mm THK	DN20	23.00	Elbow
ZAFCK06875	DIN 11850 DN25 OD 29.00mm T-FIT Clean Insulating Elbow 6.35mm THK	DN25	29.00	Elbow
ZAFCK06876	DIN 11850 DN32 OD 35.00mm T-FIT Clean Insulating Elbow 6.35mm THK	DN32	35.00	Elbow
ZAFCK06516-D	DIN 11850 DN40 OD 41.00mm T-FIT Clean Insulating Elbow 6.35mm THK	DN40	41.00	Elbow
ZAFCK06877	DIN 11850 DN50 OD 53.00mm T-FIT Clean Insulating Elbow 6.35mm THK	DN50	53.00	Elbow
ZAFCK05238	DIN 11850 DN65 OD 70.00mm T-FIT Clean Insulating Elbow 6.35mm THK	DN65	70.00	Elbow
ZAFCK06878-D	DIN 11850 DN80 OD 85.00mm T-FIT Clean Insulating Elbow 6.35mm THK	DN80	85.00	Elbow
ZAFCK05743-D	DIN 11850 DN10 OD 13.00mm T-FIT Clean Insulating Tee 6.35mm THK	DN10	13.00	Tee
ZAFCK05744-D	DIN 11850 DN15 OD 19.00mm T-FIT Clean Insulating Tee 6.35mm THK	DN15	19.00	Tee
ZAFCK06509-D	DIN 11850 DN40 OD 41.00mm T-FIT Clean Insulating Tee 6.35mm THK	DN40	41.00	Tee
ZAFCK05900-D	DIN 11850 DN8 OD 10.00mm T-FIT Clean Insulating Tee 6.35mm THK	DN8	10.00	Tee
ZAFCK06879	DIN 11850 DN20 OD 23.00mm T-FIT Clean Insulating Tee 6.35mm THK	DN20	23.00	Tee
ZAFCK06880	DIN 11850 DN25 OD 29.00mm T-FIT Clean Insulating Tee 6.35mm THK	DN25	29.00	Tee
ZAFCK06881	DIN 11850 DN32 OD 35.00mm T-FIT Clean Insulating Tee 6.35mm THK	DN32	35.00	Tee
ZAFCK06882	DIN 11850 DN50 OD 53.00mm T-FIT Clean Insulating Tee 6.35mm THK	DN50	53.00	Tee
ZAFCK06883	DIN 11850 DN65 OD 70.00mm T-FIT Clean Insulating Tee 6.35mm THK	DN65	70.00	Tee

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AZOTE® / ZOTEK® / T-FIT® / MuCell®



# T-FIT<sup>®</sup> Clean

Technology, design & installation

# T-FIT<sup>®</sup>

INSULATION

**Fit** to perform. **Fit** to last



This document considers the use of PVDF (Polyvinylidene fluoride) as the base polymer in the manufacture of thermal insulation products. The advanced material properties of PVDF are further enhanced through use of a propriety high pressure gassing process used to create a cellular material which provides market leading thermal insulation product performance.

## Contents

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Engineering & Technology

---

Thermal insulation design criteria

---

Installation

---

Installation drawings

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Further information



# T-FIT<sup>®</sup> Clean

## Technology, design & installation

**T-FIT<sup>®</sup>**  
 INSULATION

**Fit** to perform. **Fit** to last

## Engineering & Technology

PVDF is a highly non-reactive thermoplastic fluoropolymer, a specialty plastic used in applications requiring the highest purity, as well as resistance to solvents, acids, and hydrocarbons. Longevity and inherent flame retardancy make PVDF an outstanding polymer from which to make thermal insulation products.

Producing cellular foams (the basis of many thermal insulation materials) from PVDF can be achieved in a propriety high-pressure nitrogen gassing process. The process begins with extrusion of solid PVDF sheets, which are then crosslinked.

In the second stage, sheets are loaded into a high-pressure autoclave, and heated to above the melt point of the polymer. The vessel is pressurised with nitrogen over a long time period which diffuses the gas into the sheets. A rapid depressurisation destabilises the absorbed nitrogen, nucleating cells in the sheets. The sheets are then cooled under pressure in the autoclave, locking in the nitrogen in the unexpanded sheets, prior to being unloaded. Typical operating temperatures can reach 250°C/482°, with pressure reaching 675 bar/10,000 psi.

In the final stage the nitrogen charged sheets are loaded into a low-pressure autoclave, and under moderate pressure are heated to above the polymer melt point. The pressure is reduced, causing the nitrogen to expand, and turning the sheet into a larger foam sheet. The expansion process is unconstrained and so uniform in each dimension.

The combination of a high-pressure gassing/expansion process applied to PVDF polymers produces an outstanding insulation material with the following properties:

1. Material is closed cell, where the structure of the material comprises a network of completely disconnected cells. This means that the material will not absorb moisture, the major reason why insulation materials fail under condensation control applications, and key to the materials exceptional longevity and consistent performance over time.
2. Given the above, outer cladding systems are not required, as the insulation material is already an effective moisture vapour barrier.
3. The high-pressure gassing process creates a uniform fine cell structure throughout the material. This means thermal conductivity values are low, and

consistent throughout the gauge of the material. Thermal conductivity values do not increase over the lifetime of the material.

4. High pressure gassing processes that convert solid polymers into cellular foams do not require blowing agents. This means there are zero residual chemicals left in the foam which create VOC's, an important consideration in many clean room environments.
5. The nature of foamed PVDF means the construction of the material does not release or contribute to any environmental pollution created by loose fibres, airborne particles, or dust.
6. Crosslinking of PVDF polymers creates a robust foam material that recovers to original thickness following compression. This means the product is not easily damaged in service or during installation.
7. The product is naturally highly flame retardant and does not rely on addition of fire-retardant additives. Independent reaction to fire testing and qualifications from market leading authorities are readily available.
8. PVDF polymers are naturally highly chemical resistant and impervious to most cleaning agents. This makes the product ideal for use in sterile and aseptic production environments where high levels of purity are required.
9. Insulation materials based on PVDF polymers are naturally resistant to fungal growth, and when tested at 30°C over 28 days show zero growth of fungal spores. Antimicrobial additives are not required.
10. PVDF foams are light weight, easy to handle, install and fabricate. Insulation supports on vertical pipelines are not required, reducing cost and complexity.
11. A range of accessories are available, including PVDF based tapes and approved adhesives/sealant products. Combined with moulded fittings for elbow and tee's, and insulation boxes designed to insulate valves, flanges and other pipeline equipment, the insulation system is both easy and quick to install.

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## Design Criteria

When specifying an insulation system, the following factors will be considered by an engineer:

- a. Temperature pipeline contents (line temperature), which usually fall into the following application areas. Hot side applications describe pipework running at temperatures higher than 60°C, where personal protection and energy conservation are usually the reason to install insulation. Upper temperature limit for PVDF based foam insulation is 160°C peak, 145°C continuous. Contact temperature will not cause injury to an operator given minimum insulation thickness of ¼" (6.35mm).
- b. Cold side applications describe pipework running at low temperature where in combination with environmental conditions, condensation will form on the uninsulated pipework. The function of insulation is to prevent condensation formation, by providing a surface temperature above the environments dew point. Being completely closed cell, PVDF insulation is ideally suited to cold side applications, being able to resist water and vapour penetration through its closed cell construction.
- c. Thermic shock applications cover processes that typically cycle through high and low temperatures, example CIP (clean in place) processes where high temperature steam is flushed through pipelines that otherwise transport cold dairy products. This rapid change in temperature has no impact on PVDF based insulation systems.
- d. Cladding systems acting as an outer water vapour barrier must be employed when open cell insulation products are considered. Usually of minimal gauge, they can be easily damaged allowing insulation to absorb and wick moisture into the material, which in some conditions can lead to water freezing in the insulation and rendering the material useless. PVDF based insulation, being completely closed cell do not require any outer cladding system.
- e. Thermal conductivity values are largely governed by cell size. High pressure gassing processes produce foams with very small, uniform cell structures which lead to low thermal conductivity values. The nature of PVDF polymers mean conductivity values measured after production will remain the same during the service life of the product.
- f. Blowing agents (Azodicarbonamide or ADC) are often used as foaming agents in insulation foams, where residual volumes remain in the materials after foaming, creating VOC's (volatile organic compounds) which can create environmental concerns. High pressure gassing processes do not require blowing agents and as such create extremely pure foams with negligible levels of VOC's.
- g. Fibre and dust erosion can be of concern in many applications. Due to its nature PVDF based insulation foams will not emit or contribute to environmental pollution of any kind, either in service, installation, or during any maintenance of pipeline equipment.
- h. Many insulation products will permanently deform when compressed, especially during installation. As PVDF foams are crosslinked, then the material will recover to its original thickness following compression, making the material particularly robust through the installation stage.
- i. Reaction to fire performance of many insulation materials rely on the correct addition of fire-retardant chemicals. PVDF based foam materials exhibit naturally high levels of fire retardancy, achieved without any fire-retardant chemicals, but reaching market leading reaction to fire certification.
- j. Applications where insulation with high chemical resistance is required are ideally suited to PVDF based foams, as fluoropolymers are particularly resistant to a wide range of chemicals.
- k. Sterile, aseptic production areas require insulation that will prevent growth of fungal spores. PVDF is naturally resistant to fungal growth; antimicrobial additives are not required.

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## Installation

Lightweight flexible insulation systems are generally easy to cut, quick to install by virtue of factory installed closure tapes, and do not require use of any personal protection equipment. When supplied with moulded fittings for elbows and tee pipe connections, and fabricated insulation boxes for valves, flanges and other pipeline equipment, such systems can be installed quickly, easily and with minimal training. Such insulation systems should be supplied with appropriate tapes, sealant, and adhesives, that ensure tight water vapour resistant joints, particularly important on low temperature applications, where condensation control is particularly important.

## Installation drawings

1. General arrangement
2. Layered construction
3. Straight pipe installation
4. Tee fitting installation
5. Elbow fitting installation
6. Insulation box – Flange installation
7. Insulation box – Valve installation
8. Insulation box – Pipe support

<https://t-fit.org/t-fit-clean/>



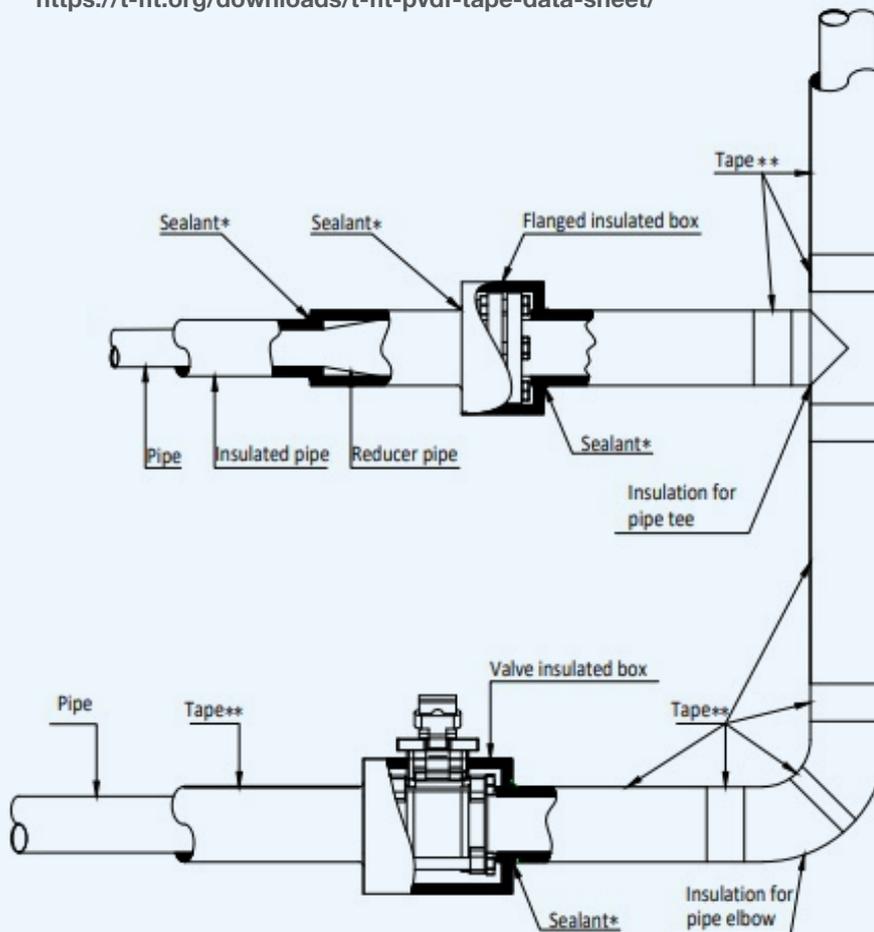
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## Installation: General arrangement

1. Insulation should be installed under compression at all times, and not stretched to make fit.
  2. Sealant must be applied to all joints.
  3. Detailed installation instructions can be found at <https://t-fit.org>
  4. Installation videos can be found at <https://t-fit.org/t-fit-clean/>
- \* Approved sealant details can be found at <https://t-fit.org/downloads/t-fit-clean-recommend-sealant/>
- \*\* Approved all drawings tape details can be found at <https://t-fit.org/downloads/t-fit-pvdf-tape-data-sheet/>



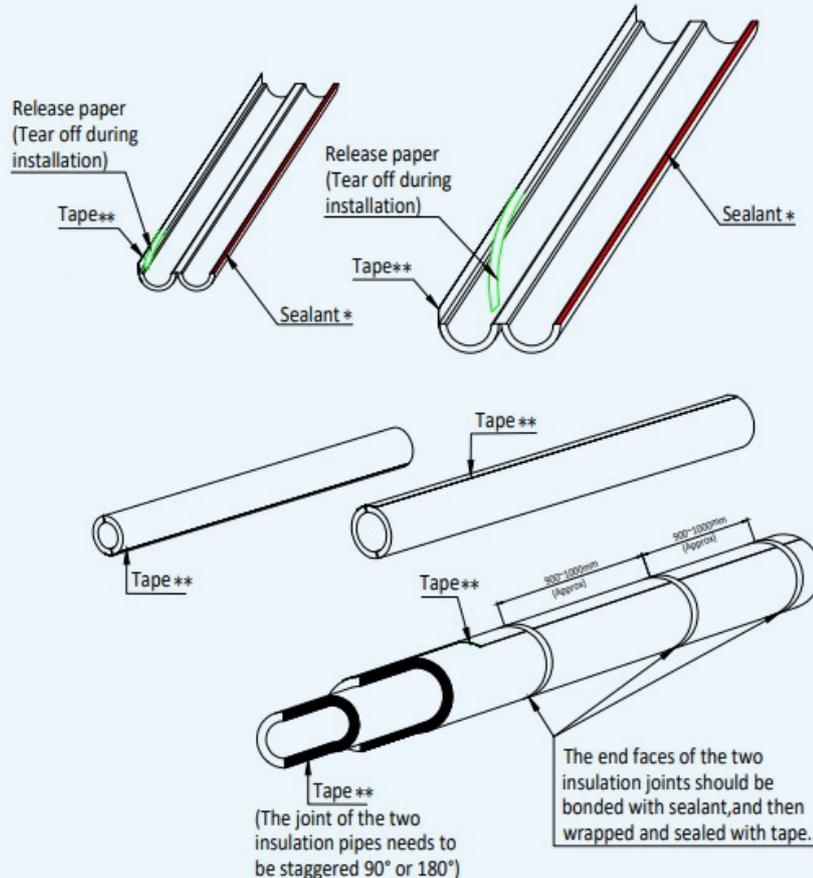
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## Installation: Layered construction

1. Insulation should be installed under compression at all times, and not stretched to make fit.
  2. Sealant must be applied to all joints.
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  4. Installation videos can be found at <https://t-fit.org/t-fit-clean/>
- \* Approved sealant details can be found at <https://t-fit.org/downloads/t-fit-clean-recommend-sealant/>
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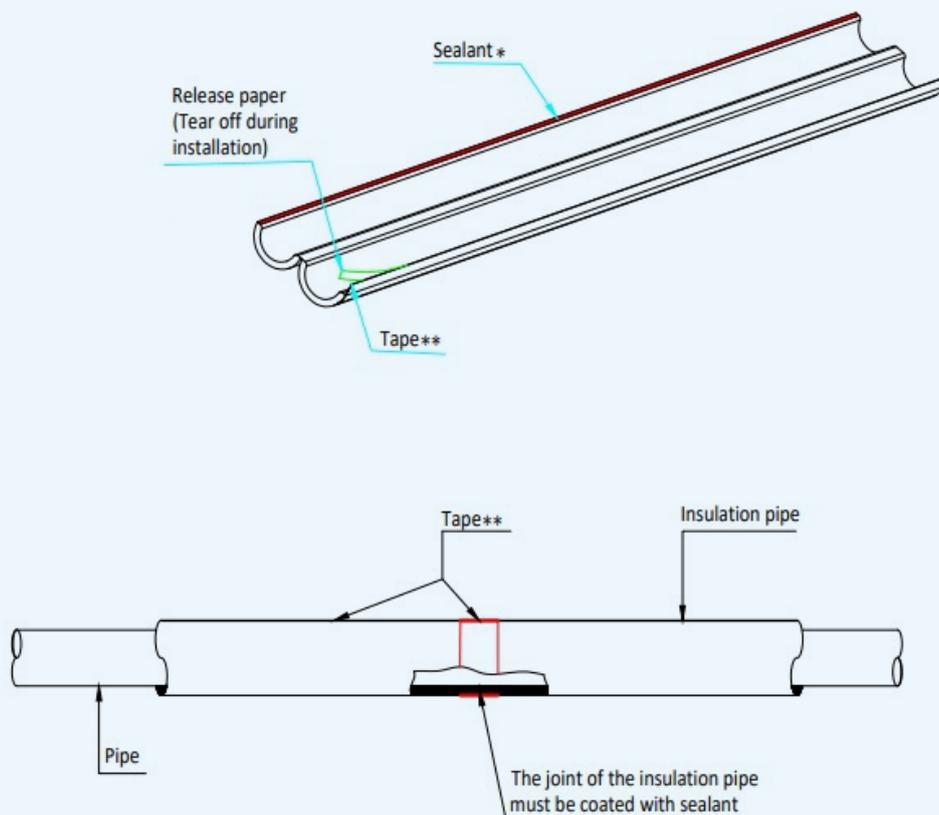
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## Installation: Straight pipe

1. Insulation should be installed under compression at all times, and not stretched to make fit.
  2. Sealant must be applied to all joints.
  3. Detailed installation instructions can be found at <https://t-fit.org>
  4. Installation videos can be found at <https://t-fit.org/t-fit-clean/>
- \* Approved sealant details can be found at <https://t-fit.org/downloads/t-fit-clean-recommend-sealant/>
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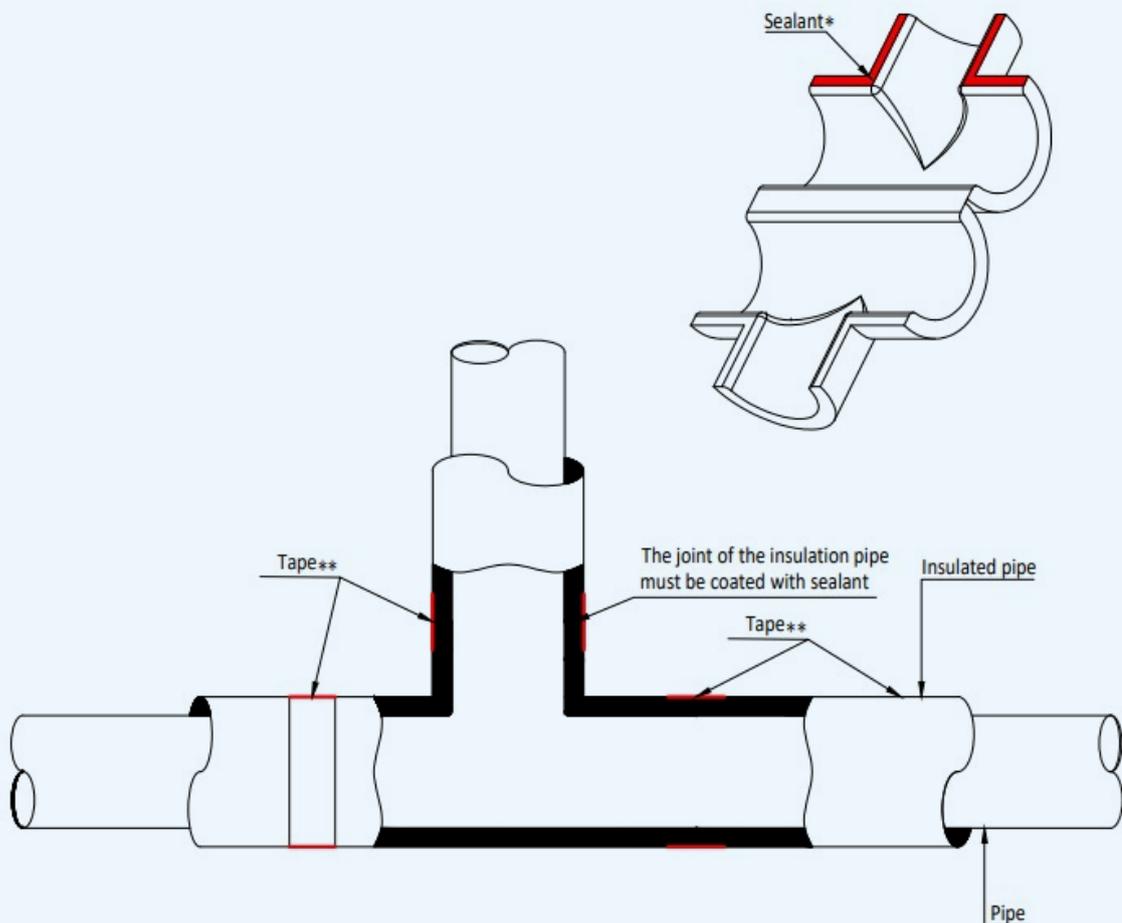
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## Installation: Tee

1. Insulation should be installed under compression at all times, and not stretched to make fit.
  2. Sealant must be applied to all joints.
  3. Detailed installation instructions can be found at <https://t-fit.org>
  4. Installation videos can be found at <https://t-fit.org/t-fit-clean/>
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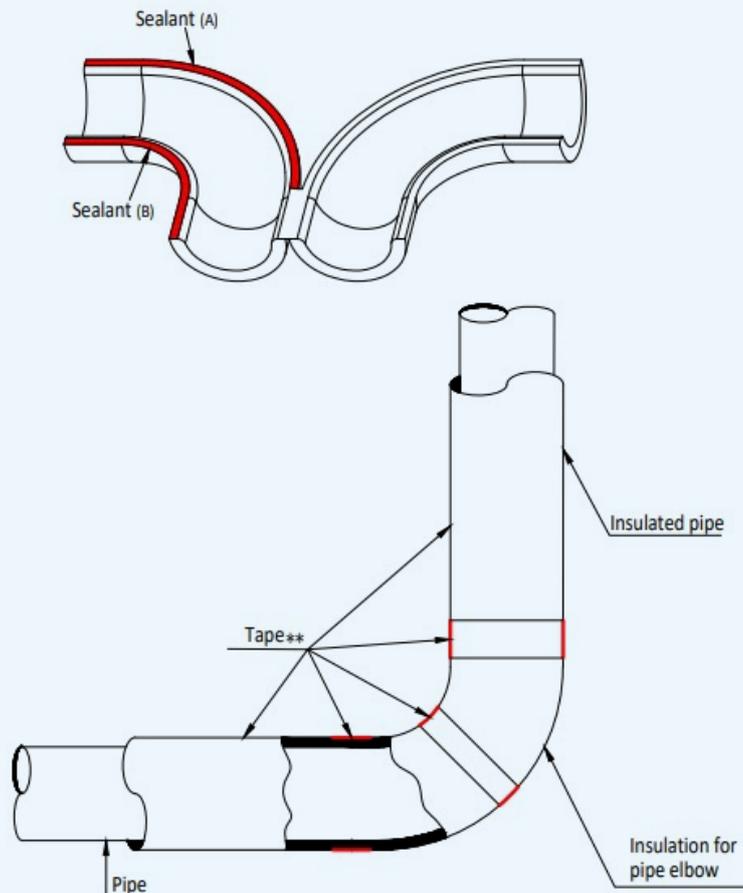
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## Installation: Elbow

1. Insulation should be installed under compression at all times, and not stretched to make fit.
  2. Sealant must be applied to all joints.
  3. Detailed installation instructions can be found at <https://t-fit.org>
  4. Installation videos can be found at <https://t-fit.org/t-fit-clean/>
- \* Approved sealant details can be found at <https://t-fit.org/downloads/t-fit-clean-recommend-sealant/>
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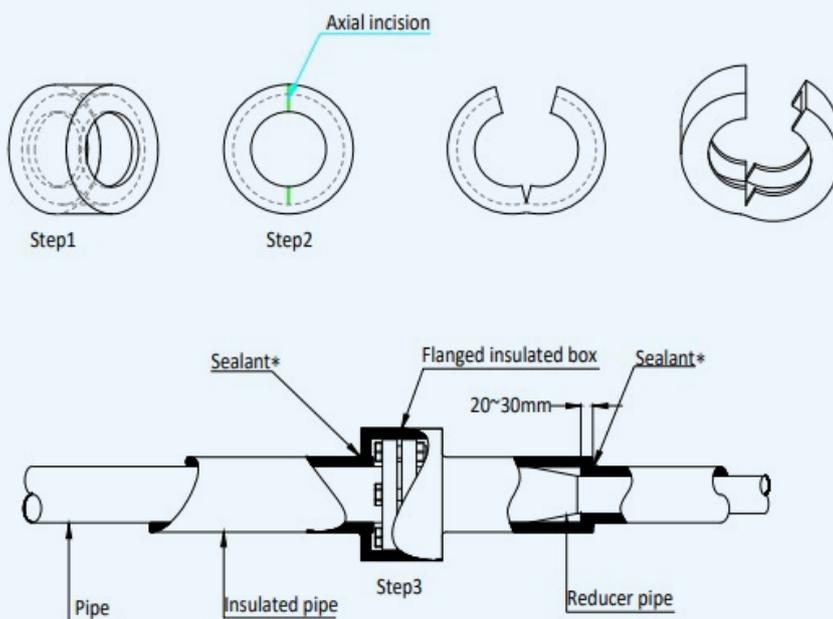
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## Installation: Flange box

1. Insulation should be installed under compression at all times, and not stretched to make fit.
  2. Sealant must be applied to all joints.
  3. Detailed installation instructions can be found at <https://t-fit.org>
  4. Installation videos can be found at <https://t-fit.org/t-fit-clean/>
- \* Approved sealant details can be found at <https://t-fit.org/downloads/t-fit-clean-recommend-sealant/>
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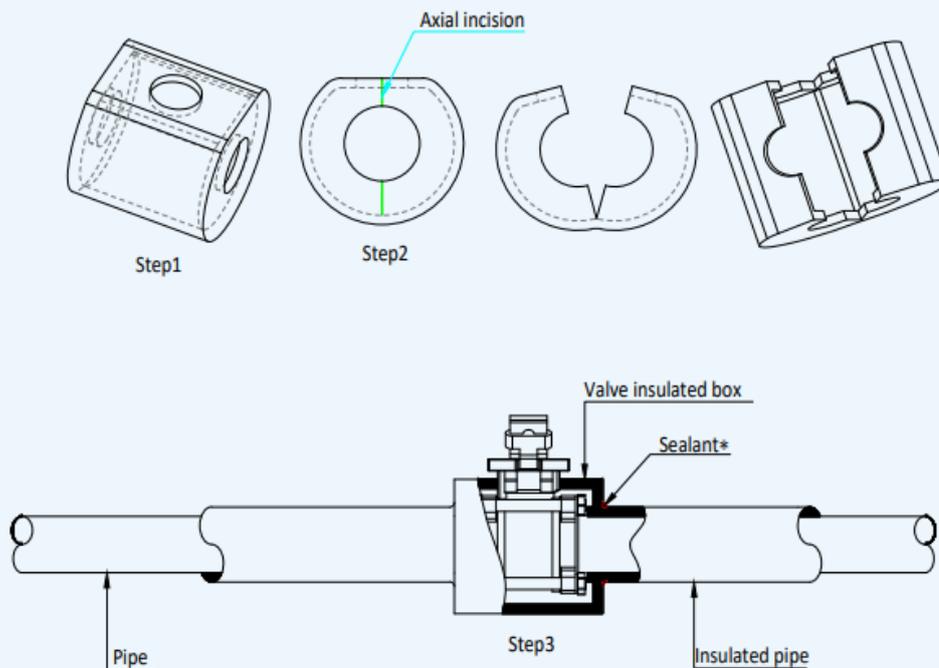
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## Installation: Valve box

1. Insulation should be installed under compression at all times, and not stretched to make fit.
  2. Sealant must be applied to all joints.
  3. Detailed installation instructions can be found at <https://t-fit.org>
  4. Installation videos can be found at <https://t-fit.org/t-fit-clean/>
- \* Approved sealant details can be found at <https://t-fit.org/downloads/t-fit-clean-recommend-sealant/>
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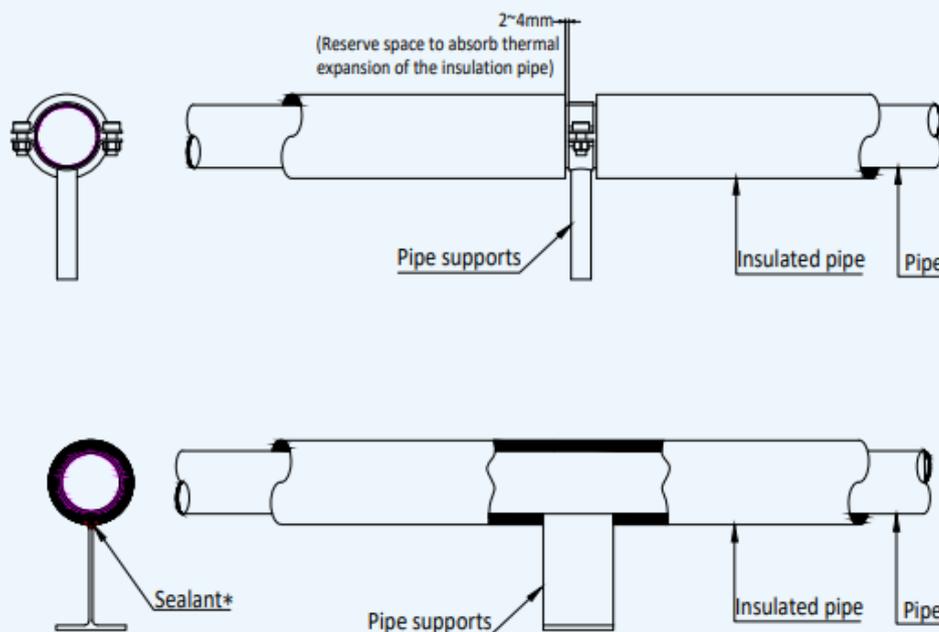
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## Installation: Pipe support

1. Insulation should be installed under compression at all times, and not stretched to make fit.
  2. Sealant must be applied to all joints.
  3. Detailed installation instructions can be found at <https://t-fit.org>
  4. Installation videos can be found at <https://t-fit.org/t-fit-clean/>
- \* Approved sealant details can be found at <https://t-fit.org/downloads/t-fit-clean-recommend-sealant/>
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Quality  
 FM 01570  
 ISO 9001:2015



Safety  
 OHS 52538  
 ISO 45001:2018



Environment  
 EMS 36270  
 ISO 14001:2015

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# T-FIT® Clean Installation Guide

# T-FIT® INSULATION

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T-FIT® Clean, moulded from ZOTEK® F high-performance PVDF foam, is the leading insulation tailored for clean room environments found in pharmaceutical, semiconductor and highly controlled production environments.

T-FIT® Clean can be used to address condensation control, energy conservation, or provide personal protection, and can be installed around internal or external hot/cold, waste, chilled, specialist process, refrigeration and HVAC pipework.

Product and tape specifications



Sealant/Adhesive specifications



ZAC des Pierres Blanches - 31, rue du Traité de Rome - 69780 MIONS (France)  
Tel.: +33 4 78 20 37 38 - Fax: +33 4 78 20 46 95 - info@tubes-technologies.com

S.A.S au capital de 144 000 € • R.C. Lyon B 404 486 659 • N° TVA Intracom. FR 76 404 486 659 • Siret : 404 486 659 000 37 • Code APE : 515C

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# T-FIT® Clean

## Installation Guide

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### Before starting installation

- 1 Suitable gloves must be worn at all times when handling T-FIT® Clean to ensure the product remains clean, and free of dirt, dust or grease that can be easily transferred during handling with unprotected hands.
- 2 T-FIT® Clean should not be installed in extreme temperatures or high levels of humidity as these conditions can adversely impact the performance of tapes and sealant. In general, minimum environmental temperatures should not fall below 15°C / 60°F, while max temperatures should not exceed 40°C / 105°F.
- 3 Pipework or any surface to be insulated should be free of contaminants, oil, grease, water/moisture etc. Any foreign matter must be wiped clean ahead of installation.
- 4 T-FIT® Clean is packed in bags and should be removed from the packaging only prior to installation. Care should be taken to keep the installation environment as clean and dust free as possible.
- 5 T-FIT® Clean should not be installed on live plant or processes, whether this is hot, cold pipework or ducting. Pipe/duct work should be allowed to return to ambient temperature before any installation takes place.
- 6 T-FIT® Clean should not be stretched to fit, please ensure the correct dimensions prior to installation.
- 7 Use of sealant on all joints is considered mandatory on T-FIT® Clean installation, and is used to seal all longitudinal joints, butt joints between tubes, assembly of elbows, tee's etc. and fitting of insulation boxes.  
 When applying sealant to joints, ensure that the insulation does not accidentally bond to the pipework. T-FIT Clean insulation should be able to expand and contract independently relative to the pipework.
- 8 Tubes and sheet should be installed under compression, with insulation cut so that a slight excess of material pushes the joints closed.
- 9 In general, fittings around elbows, tee's etc. should be installed first, followed by straights, fitted under compression as detailed above. Insulation boxes are the last part to be installed and this completes installation of T-FIT® Clean.
- 10 In hot and humid environments, tapes should be applied as quickly as possible to T-FIT® Clean following removal of the release/backing film, to prevent premature drying of adhesives.
- 11 T-FIT® Clean tapes are pressure sensitive activated (PSA). To ensure adhesion, a constant pressure must be applied along the entire length of the applied tape onto the T-FIT product.
- 12 Take care to ensure an even and consistent application of sealant is applied when making joins and ensure all gaps are fully adhered and sealed. This is especially important for cold/chilled lines, where contact between ambient air and the surface of the cold/chilled pipework can create condensation.
- 13 Longitudinal seams running the length of the tube and butt joints between tubes should be made with sealant and secured with tape.
- 14 T-FIT® Clean is a closed cell material so water vapour barrier/outer cladding/jacketing systems are not required. However, care should be taken to ensure all seams and joints are fully sealed and vapour tight around elbows, tee's and insulation boxes etc.
- 15 If needed, fabrication of fittings, elbows, tee's, etc. should take place in a suitable workshop/workstation type environment. T-FIT® Clean recommended sealant typically requires 6 hours to cure. Planning and fabrication of fittings ahead of install is highly recommended, making installation on site much faster, easier, and improving overall workmanship.
- 16 With care, as an alternative to 15. above, fittings can be assembled around elbows, tee's etc, using existing pipework as a former. As an example, a segmented bend can be built up around the actual bend one segment at a time, ensuring each segment is adhered to each other with the use of sealant. Tape around each segment joint should be applied after the sealant has cured, usually 6 hours after initial application.

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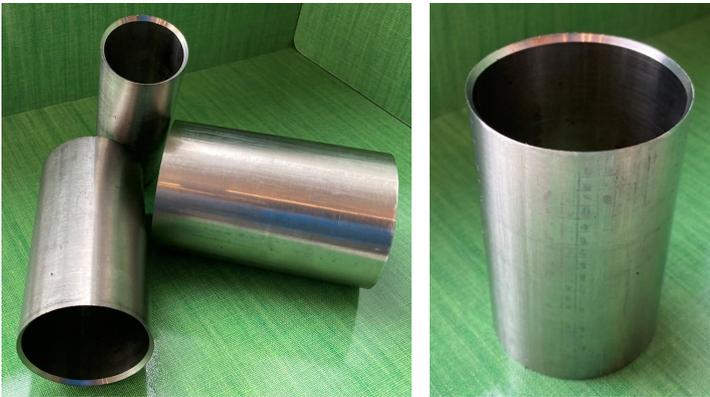
## Tools required

Long bladed knife ~300mm/12", straight edged, non-serrated, for cutting tubes in a mitre block.

Mitre block which allows for accurate cutting of tubes at 90°, 45°, 22.5°, 15°, 11.25° angles, simplifying fabrication of segmented elbows.

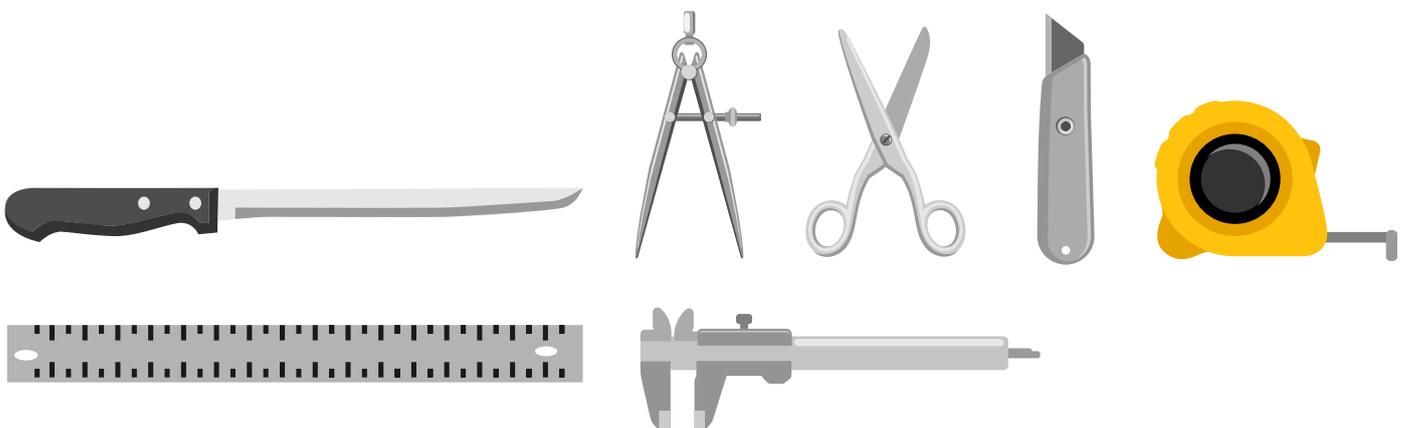
General measuring tools, including flexible tape measure, steel ruler, callipers to measure tube diameter, straight edge to cut against, marker pen, small knife, scissors.

Where holes need to be cut into T-FIT products, for example fabricating a tee fitting or installing an insulation box, such openings are easy to make with the aid of a sharpened tube of appropriate size.



## Preparation

- 1 Always use sharp knives and cutting equipment, with good quality tools in general.
- 2 T-FIT® Clean products should be installed in a dust free, clean environment, with pipework cleaned prior to install.
- 3 Installation requires the use of tapes and sealant to make all good joints. Special care must be taken to ensure the insulation surfaces remain free of dust/dirt.
- 4 Reminder - T-FIT® Clean tapes are pressure sensitive activated (PSA). To ensure adhesion, a constant pressure must be applied along the entire length of the cladding/tape.
- 5 Reminder - Care must be taken to ensure an even and consistent application of sealant is applied where required, with care taken to ensure all gaps are fully adhered and sealed.
- 6 Reminder - Installation of fittings around bends, elbows, etc. should be the starting point of any installation, followed by installation of straights, cut to length and installed under compression, followed by fitting of insulation boxes.
- 7 Reminder – always wear gloves when handling T-FIT® Clean. Remove from packing only when ready to install.



# T-FIT<sup>®</sup> Clean

## Installation Guide

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### Typical order of work

- a Review installation and estimate quantities of fittings (e.g. elbows, bends etc.) required to complete the install.
- b At the work site, ensure the plant is not active and pipework has reached ambient temperature.
- c Check pipework is generally clean and free of dust and contaminants. Wipe down as required to ensure cleanliness.
- d Install fittings, elbows and tee's before straights.
- e Straights should be cut slightly oversize to allow insulation to be fitted under compression, pushing butt joints closed.
- f Insulation boxes complete the T-FIT<sup>®</sup> Clean installation process.

# T-FIT® Clean Installation Guide

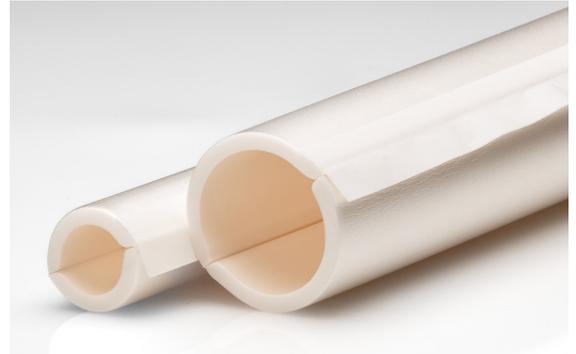
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Further details  
are available at  
T-FIT.org  
with video showing  
the install process

## 1: Straights

In general, elbows, tee's, etc. should be installed first. Straight lengths are then measured and cut to fit tightly under compression against the installed fittings.



- 1.1 Using a sharp knife and mitre block, cut the Hygiene tube to length as required. The mitre block helps to ensure an accurate perpendicular cut.
- 1.2 Unpick a short length of the cladding adhesive tape liner at each end – this is easier to carry out ahead of installation around pipework, then install insulation around pipework.



- 1.3 Apply sealant down the length of the tube, and to the ends of the tube to make good butt joints.
- 1.4 Use of sealant on all joints is considered mandatory for T-FIT® Clean installation, and is used to seal all longitudinal joints butt joints between tubes, assembly of elbows, tee's etc., and fitting of insulation boxes.



- 1.5 Remove the tape backing liner to expose the adhesive.



- 1.6 Applying even pressure over the whole length of the tape, squeeze the joint to secure the joint.

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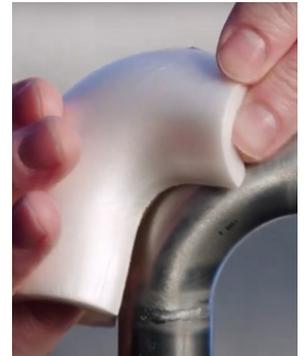
Further details are available at [T-FIT.org](http://T-FIT.org), with video showing the install process

## 2: 90 degree elbow

90-degree elbows are supplied as moulded parts.



2.1 Apply sealant to the outer edge of the fittings, close up the elbow and leave for ~6 hours for the sealant to cure.



2.2 After the sealant has cured the fitting is installed around the elbow, and sealant applied to the internal edges.



2.3 The fitting is secured with tape cut down to 12.7mm width, applied around the throat of the elbow.



Tape should not be applied on inner seam.



Apply tape diagonally across Elbows, after prepping Elbow seams with ZAXX9525-01 and apply tape to both butt ends.

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Further details are available at [T-FIT.org](http://T-FIT.org), with video showing the install process

## 4: Reducer

Changes in diameter of pipework can often be accommodated by careful selection of existing T-FIT® Clean insulation tube sizes. Example a 50mm/2" pipe reducing to 38mm/1.5" can be insulated with 50mm and 38mm T-Fit® Clean tubes respectively, given wall thickness of 6.35mm/¼", the 50mm Clean can easily overlap the smaller 38mm insulation.



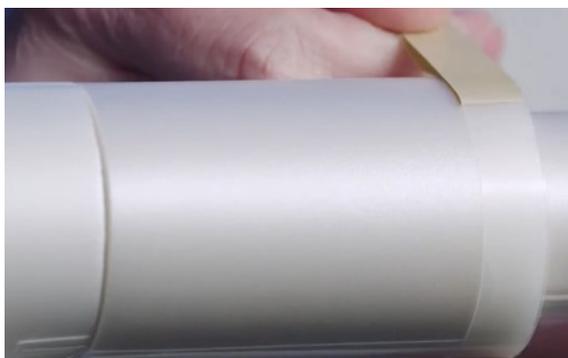
4.1 Carefully apply sealant to the longitudinal join of the smaller insulation tube, in this example the 38mm / 1.5" tube.



4.3 Carefully apply sealant/adhesive to the longitudinal join, and the end of the second insulation tube, preparing the butt joint to the next item of insulation. In this example the 50mm / 2" tube.

4.2 Install the prepared T-FIT® Clean tube.

4.4 Install the second prepared T-FIT® Clean tube.



4.5 Apply tape to both ends of the larger, overlapping tube.



4.6 Apply sealant to the overlapping join between the smaller and larger T-FIT® Clean tubes.

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Further details are available at [T-FIT.org](http://T-FIT.org), with video showing the install process

## 5: Tee

Insulating tee's starts with preparing a moulding part



5.1 Apply tape cut down to 12.7mm width to the tee fitting.



5.2 Carefully apply sealant to the fitting edges.



5.3 Install the prepared tee fitting.



# T-FIT® Clean Installation Guide

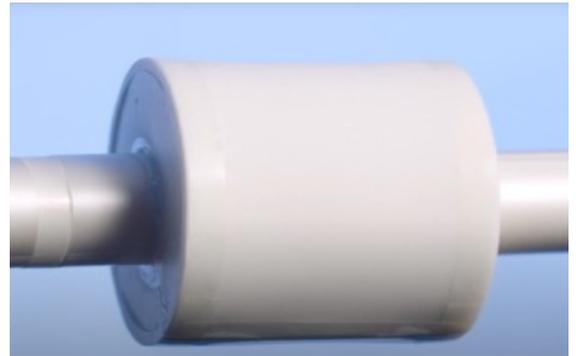
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## 6: Insulation Box

T-FIT® Insulation boxes can be used to insulate valves, flanges and other pipeline equipment. Available in various sizes, please contact the T-FIT team to select insulation boxes of appropriate dimensions.



6.1 Using a sharpened piece of tube (see page 5), cut a hole in each end of the Insulation box appropriate to the outer diameter of the insulated pipework into which the Insulation box is to be fitted.



6.2 For fitting around a valve as per example, cut a third hole into the top of the Insulation box to accommodate the valve stem.



6.3 Carefully cut the Insulation box down the centre stopping just short of the bottom layer of insulation.



6.4 Open the Insulation box and install around the valve, closing the two halves to complete the installation.

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## 6: Insulation Box

Continued

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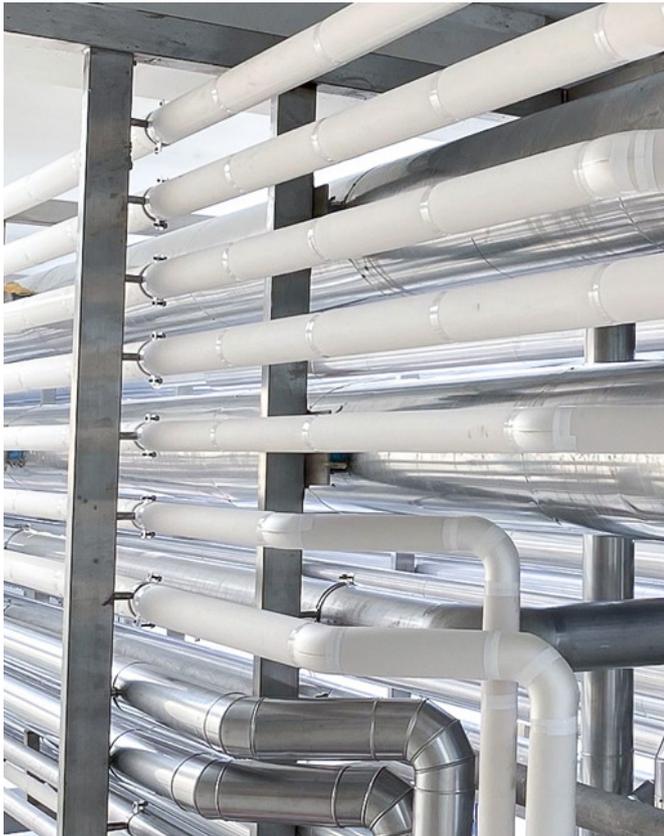


- 6.5 Apply sealant to the joints around the box, and tape to the ends to firmly secure in place.

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# T-FIT® INSULATION

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# T-FIT<sup>®</sup> Clean

## Recommended Sealant

# T-FIT<sup>®</sup>

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### Silirub 2/S

Silirub 2/S is a high-quality, neutral, elastic one-component silicone based joint sealant.

### Product description

**Item code:** SUN901



Technical data	
Basis	Polysiloxane
Consistency	Stable paste
Curing system	Moisture curing
Skin formation* (23 °C/50% R.H.)	Ca. 9 min
Curing speed * (23 °C/50% R.H.)	Ca. 2 mm/24h
Hardness**	25 ± 5 Shore A
Density**	Ca. 1,03 g/ml (transp, brilliant white) Ca. 1,25 g/ml (colours)
Elastic recovery (ISO 7389)**	> 80 %
Maximum allowed distortion	25 %
Max. tension (ISO 37)**	Ca. 1,25 N/mm <sup>2</sup>
Elasticity modulus 100% (ISO 37)**	Ca. 0,39 N/mm <sup>2</sup>
Elongation at break (ISO 37)**	> 700 %
Temperature resistance**	-60 °C → 180 °C
Application temperature	5 °C → 35 °C

\* These values may vary depending on environmental factors such as temperature, moisture, and type of substrates.

\*\* This information relates to fully cured product.

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### Properties

- Excellent moisture resistance
- Neutral curing
- Low modulus
- Impervious to mould, contains ZnP (biocide with fungicidal action)
- Very easy to apply
- UV-resistant
- Permanently elastic after curing
- Very good adhesion on many materials
- Very good resistance to ageing
- Not paintable
- Not suitable for natural stone

### Applications

- Joints in sanitary rooms (on synthetic baths and tubs) and kitchens.
- Top sealing in glazing.
- Sealing in cold store rooms and container construction.
- Sealing in airconditioning systems.

### Packaging

Colour: transparent, white, brilliant white, creame white, RAL9010 (white), grey-white, grey, concrete grey, basalt grey, transparentgrey, medium grey, manhattan, RAL7038 (grey), RAL9006 (aluminium-white), light ivory, jasmine, silver grey  
 Packaging: 300 ml cartridge

### Shelf life

18 months in unopened packaging in a cool and dry storage place at temperatures between +5 °C and +25 °C.

### Chemical resistance

Resistant to intermittent exposure to salt water, detergents, oils, weak acids and bases (preliminary test required). Poor resistance to aromatic solvents, concentrated acids and chlorinated hydrocarbons.

### Substrates

Substrates: all usual building substrates, ceramic tiles, enamel, stainless steel, acrylic baths, glass, corian, ...  
 Nature: rigid, clean, dry, free of dust and grease.

Surface preparation: Silirub 2/S has a good adhesion to most substrates. However, for optimal adhesion and in critical applications, such as joints exposed to extreme weather conditions, high- or water-loaded joints, we recommend to follow a pre-treatment procedure. Prepare non-porous surfaces with a Soudal activator or cleaner (see Technical Data Sheet). Porous surfaces should be primed with Primer 150. There is no adhesion on PE, PP, PTFE (Teflon®) and bituminous substrates. We recommend a preliminary adhesion and compatibility test on every surface.

### Joint dimensions

Min. width for joints: 5 mm

Max. width for joints: 30 mm

Min. depth for joints: 5 mm

Recommendation sealing jobs:

joint width = 2 x joint depth.

### Application method

Apply the product by means of a manual-, battery- or pneumatic- caulking gun. Apply Silirub 2/S evenly without air inclusions into the joint. Smoothen the joint with a spatula with the help of finishing solution. Avoid that soapy solution comes between the joint edges and sealant (to prevent adhesion loss).

Application method: With a manual, pneumatic or accu caulking gun.

Cleaning: Clean with Soudal Surface Cleaner or with Soudal Swipex, immediately after use Cured Silirub 2/S can only be removed mechanically.

Finishing: With a soapy solution or Soudal Finishing Solution before skinning. Repair: With the same material.

### Health- and Safety Recommendations

Take the usual labour hygiene into account. Consult label and material safety data sheet for more information.

### Remarks

- Do not use on natural stones like marble, granite,... (staining). Use Soudal Silirub MA or Silirub+ S8800 for this application.
- Do not use on polycarbonate. Use Silirub PC instead.
- The sanitary formula should not replace regular cleaning of the joint. Excessive contamination, deposits or soap remainings will stimulate the development of fungi.
- A total absence of UV can cause a color change of the sealant.
- Discoloration due to chemicals, high temperatures, UV-radiation may occur. A change in color does not affect the technical properties of the product.
- In an acid environment or in a dark room, a white sealant can slightly turn yellow. Under the influence of sunlight it will turn back to its initial colour.
- We strongly recommend not to apply the product in full sunlight as it will dry very fast.
- When finished with a finishing solution or soapy solution, make sure that the surfaces are not touched by this solution. This will cause the sealant not to adhere to that surface. Therefore we recommend to only dip the finishing tool in this solution.
- Do not use in applications where continuous water immersion is possible.
- Not suitable for bonding aquariums.
- When using different reactive joint sealants, the first joint sealant must be completely hardened before the next one is applied.
- Contact with bitumen, tar or other plasticizer releasing materials such as EPDM, neoprene, butyl, etc. is to be avoided since it can give rise to discolouration and loss of adhesion.

### Standards and certificates

- IBE-BVI Direct Food Contact EU Reg. Nr.1953- 2004 - EN 1186-1 Report CFP- 13.009C
- Report IANESCO 3812-food label for applications in food surroundings.
- Report IANESCO 551, conformity to FDACFR 21 § 177.2600 (e)

### Environmental clauses

Leed regulation:

Silirub 2/S conforms to the requirements of LEED. Low –Emitting Materials: Adhesives and Sealants. SCAQMD rule 1168. Complies with USGBC LEED 2009 Credit 4.1: Low-Emitting Materials – Adhesives & Sealants concerning the VOC-content.

### Liability

The content of this technical data sheet is the result of tests, monitoring and experience. It is general in nature and does not constitute any liability. It is the responsibility of the user to determine by his own tests whether the product is suitable for the application.

**Remark:** This technical data sheet replaces all previous versions. The directives contained in this documentation are the result of our experiments and of our experience and have been submitted in good faith. Because of the diversity of the materials and substrates and the great number of possible applications which are out of our control, we cannot accept any responsibility for the results obtained. Since the design, the quality of the substrate and processing conditions are beyond our control, no liability under this publication is accepted. In every case it is recommended to carry out preliminary experiments. Soudal reserves the right to modify products without prior notice.

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# T-FIT<sup>®</sup> PVDF Tape

Unique Insulation Technology

**T-FIT<sup>®</sup>**  
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## T-FIT PVDF Tape Technical Information

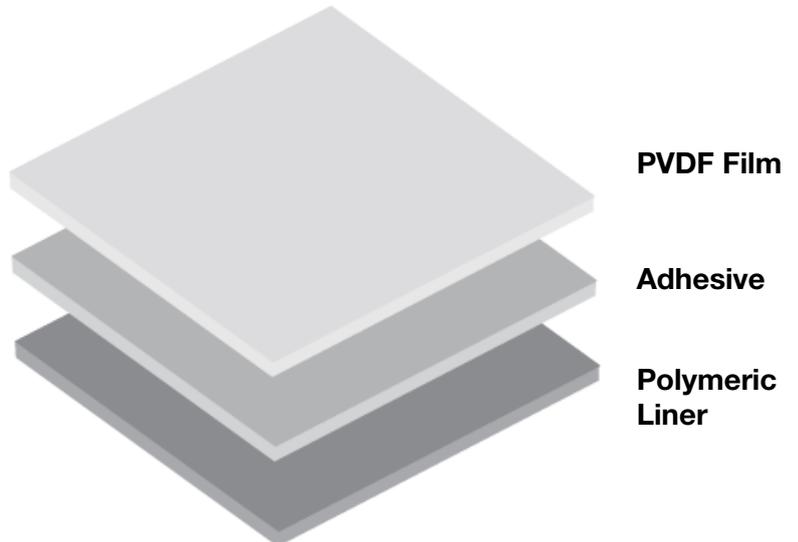
This adhesive tape product is designed specifically for T-FIT<sup>®</sup> Installations. Comprised of a PVDF polymer film and a high-performance pressure sensitive adhesive. Especially designed for chemical and flammability resistance.

## Product Description

**Product Code:** ZAXX9164

### Roll Construction:

- 0.003" PVDF polymer film
- 0.003" white high-performance adhesive
- Polymeric release liner
- Total Tape Thickness 0.011" (including release liner)



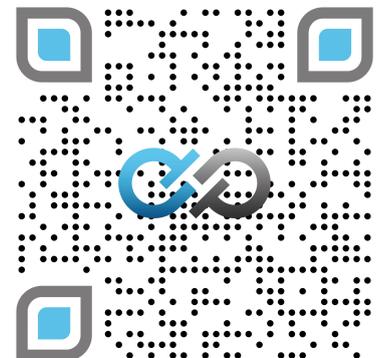
### Roll Dimensions: Product supplied as the following:

Current Product supplied as the following:

- 1" (25,4mm) wide x 60 linear yards long (54.8m)
- Supplied on a 3" plastic core
- Release liner facing outward, film inward

### Tape Format:

- Standard format of solid back or non-split liner
- Also available as a "split-back" or 50/50 split release line



# T-FIT<sup>®</sup> PVDF Tape

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### Technical Information

Property (Per ASTM D903 Al Foil to Al Plate)	Minimum Average	Maximum Individual
Peel Strength (PIW) at 70°F ± 5°F plus 7 days after 7 days aging at 70°F ± 5°F	10	9
Peel Strength (PIW) 1 day at 70°F ± 5°F plus 6 days at 95 to 100% relative humidity at 120°F ± 5°F	15	14
Peel Strength (PIW) 1 day at 70°F ± 5°F plus 6 days exposure at 160°F ± 5°F	18.5	7.5

Static load creep properties (Per ASTM D903 Al Foil to Al Plate)	Creep Time (hrs)	Minimum Average	Maximum Individual
Creep distance (inches per pound/inch of width) at 70°F ± 5°F plus 7 days after 7 days aging at 70°F ± 5°F	24	1	2
Creep distance (inches per pound/inch of width) 1 day at 70°F ± 5°F plus 6 days at 95 to 100% relative humidity at 120°F ± 5°F	24	1	2
Creep distance (inches per pound/inch of width) at 1 day at 70°F ± 5°F plus 6 days exposure at 160°F ± 5°F	24	0.5	2

#### Thermal Performance:

- Film & Adhesive is recommended to temperatures up to 212 °F / (100 °C)

#### Storage Guidelines:

- Shelf life of 18 months from date of manufacture
- Film & Adhesive is recommended to be stored at temperatures between 5 - 32°C / 40 - 90°F

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## Application Notes:

- Bonding surfaces must be clean and dry
- Once release liner is removed the tape must be applied immediately

## Application guidelines:

- Keep the tape in its original packaging until use.
- Being a pressure sensitive tape, for optimum results, an even pressure must be applied to the whole taped area to create the best possible bond between tape and substrates.
- The tape should be applied to clean and dry surfaces
- The best application conditions are obtained between temperatures between 15°C to 40°C (60°F to 105°F)

## Regulatory Data:

- PVDF Film meets FDA 177.2510 & 177.2600 Repeated Contact with Food, 177.1520 Single-use Adjuvant for use in Polyolefins 1% Concentration

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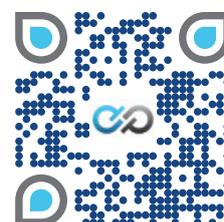


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