

# ***INSUL-TUBE / INSUL-SHEET***



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**K-FLEX MALAYSIA** is part of **L'ISOLANTE K-FLEX spa**, Italian multinational company specialized in manufacturing of elastomeric thermal & acoustic insulation materials and a worldwide market leader presents the **INSUL-TUBE / INSUL-SHEET**.

**INSUL-TUBE / INSUL-SHEET** insulation is a "Closed Cell Elastomeric Rubber Foam Insulation", an insulation designed, taking into consideration of the stringent requirement of international accepted properties.

**INSUL-TUBE / INSUL-SHEET** is manufactured at our World-Class manufacturing facility in Klang, near Selangor with machineries & setup capable of manufacturing the products adhering to strict international standard. **K-FLEX** engages the best quality raw materials, manufacturing practices and quality management system to ensure a superior quality end product.

With 21 plants worldwide, **K-FLEX** can uniquely provide On-Time Delivery, Consistent Product Quality and a Highly Competitive Price.

## TECHNICAL BENEFITS & ADVANTAGES

- > **INSUL-TUBE / INSUL-SHEET** has a low and consistent level of thermal conductivity value, over a long period of time.
- > **INSUL-TUBE / INSUL-SHEET** is indeed a perfect solution for projects where fire safety is a priority concern.
- > **INSUL-TUBE / INSUL-SHEET** insulation is a flexible and robust insulation material which offers easy and fast installation process and nevertheless a long and durable lifespan.
- > **INSUL-TUBE / INSUL-SHEET** insulation comes with a complete closed cell structure which ensure an effective and consistent insulation properties over time. The closed cell structure creates an effective vapor barrier to prevent water vapor ingress in the insulation system.
- > The superior properties of **INSUL-TUBE / INSUL-SHEET** insulation is created through a long and tedious process of Research and Development program.
- > **INSUL-TUBE / INSUL-SHEET** insulation achieves an effective thermal conductivity value of 0.034W/m.K @ 20 degrees Celsius and a high water diffusion factor  $\mu$  value > 10,000.
- > **INSUL-TUBE / INSUL-SHEET** insulation is tested according to a series of stringent standards. **INSUL-TUBE / INSUL-SHEET** is compliant to BS 476 Part 6 & 7 with Class "0" classification. ASTM E84 with effective result of 25/30 and UL 94 Class V-0.
- > **INSUL-TUBE / INSUL-SHEET** is clean room approved and environmental friendly insulation system, with numerous 3rd party test laboratory certifications Low VOC, Formaldehyde Free, CFC /HCFC Free, Fiber Free/ Dust Free, Ozone Depletion Potential of Zero, Greenguard and Greenmark (Green Building Index) Approved.
- > **INSUL-TUBE / INSUL-SHEET** insulation is also Factory Mutual Approved and tested for EMSL G21 Anti Microbial Resistant.

## TECHNICAL DATA

Property	Value/Assessment	Special Remark
Material	Elastomeric foam - Nitrile Butadine Rubber	
Cell structure	Closed-cell	
Temperature Range	Max. service temperature: +116 °C Min. service temperature: -200 °C	Tested acc.to EN 14706, EN 14707 and EN 14304
Thermal Conductivity	$\lambda \leq 0.034$ W/(m.K) at +20 °C $\lambda \leq 0.032$ W/(m.K) at 0 °C $\lambda \leq 0.028$ W/(m.K) at -50 °C	Tested acc. to DIN EN 12667, EN ISO 8497
Water vapour diffusion resistance	Water vapour diffusion resistance: $\mu \geq 10,000$ Water Absorption: 0.2% by volume	Tested acc. To EN 12086, EN 13469 Test acc to ASTM C 209
Fire performance	Surface Spread of Flames: Class 1 Fire Propagation: Total Index Performance (I) $\leq 12$ Sub Index (i1) $\leq 6$ Fire Performance: Class 0	Surface Spread of Flame: tested according to BS 476 Part 7:1997 Self-extinguishing, does not drip, does not spread flames Fire Propagation: tested according to BS 476 Part 6:1989
Density	50 to 80 kg/m <sup>3</sup>	
Other certificates	Anti microbial Greenguard Low VOC Singapore Green Building Products	Tested acc. To ASTM G21 Tested acc. To ISO 17025 Tested acc. To ISO 16000 part -3, -6, -9, -11 Approved
Ecological Data	CFC-HCFC Free Diphenyloxyde Free Formaldehyde Free	

For temperatures below -50 °C please contact our Customer Service Center to request for the corresponding technical information.

Outdoor applications should be painted with K-FLEX finish paint to the recommended thickness. Two or more coats may required.

**K-FLEX** reserves the right to change data and technical requirements without notice.

## INSUL-TUBE / INSUL-SHEET

“K-FLEX is the world’s leading manufacturer of elastomeric insulation systems. In twenty one production facilities around the world, including Poland, France, China, India, Malaysia, Dubai, Egypt, the UK and the USA some 5,000 employees develop and manufacture outstanding product solutions for thermal and acoustic insulation.

K-FLEX is committed to ensuring its products comply with the fire safety and industry-wide safety standards.

K-FLEX has 63 sales offices on five continents, offering premium service to more than 50,000 customers.

As the world’s fastest-growing company in the industry, K-FLEX is also a global player in the target markets of building services, refrigeration, air conditioning and ventilation, rail, shipping, automotive and beverage industries as well as the solar industry and OEM businesses.

K-FLEX has ISO 9001 and ISO 14001 certification.”

## PLANT TIMELINE



## ACCESSORIES

SELF ADHESIVE FOAM TAPES



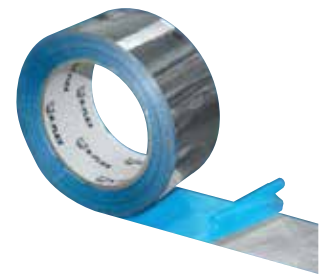
PIPE SUPPORT



K 414 GLUE



ALUMINIUM TAPE



## APPLICATION AREAS

INSUL-TUBE / INSUL-SHEET insulation system is the perfect solution for various HVAC thermal and acoustic applications:

- Refrigeration pipework
- Hot water piping system
- Ducting system
- Large pipe and tanks
- Chilled water piping system
- Drainage system



## RANGE ▶ INSUL-TUBE (2 METRES)

Copper Pipe		Iron Pipe		6 • 1/4"		9 • 3/8"		13 • 1/2"		19 • 3/4"		25 • 1"		32 • 1 • 1/4"		40 • 1 • 1/2"		50 • 2"	
OC Inches	ø OD mm	IPS Inches	ø OD mm	size	m/box	size	m/box	size	m/box	size	m/box	size	m/box	size	m/box	size	m/box	size	m/box
1/4"	6					9x6	316	13x6	200	19x6	100								
3/8"	10	1/6"	10.2			9x10	220	13x10	152	19x10	80	25x10	52						
1/2"	12					9x13	200	13x13	128	19x13	72	25x13	50						
5/8"	15	1/4"	13.5	6x16	266	9x16	188	13x16	112	19x16	72	25x16	50						
3/4"	20			6x19	180	9x19	136	13x19	100	19x19	60	25x19	40	32x19	32				
7/8"	22	1/2"	21.3	6x22	180	9x22	128	13x22	98	19x22	60	25x22	38	32x22	24	40x22	18	50x22	12
1"	25			6x25	152	9x25	108	13x25	80	19x25	50	25x25	32	32x25	24	40x25	16	50x25	10
1.1/8"	28	3/4"	26.9	6x28	130	9x28	98	13x28	72	19x28	48	25x28	32	32x28	24	40x28	16	50x28	10
1.3/8"	35	1"	33.7	6x35	100	9x35	76	13x35	58	19x35	40	25x35	30	32x35	18	40x35	16	50x35	8
1.5/8"	42	1.1/4"	42.4	6x42	90	9x42	60	13x42	50	19x42	32	25x42	24	32x42	18	40x42	12	50x42	8
1.7/8"	48	1.1/2"	48.3			9x48	50	13x48	40	19x48	28	25x48	22	32x48	16	40x48	10	50x48	8
2.1/8"	54					9x54	46	13x54	40	19x54	24	25x54	18	32x54	14	40x54	10	50x54	8
2.3/8"	60	2"	60.3			9x60	46	13x60	32	19x60	22	25x60	18	32x60	12	40x60	8	50x60	8
3"	76	2.1/2"	76.1			9x76	40	13x76	30	19x76	18	25x76	12	32x76	8	40x76	8	50x76	6
3.1/2"	89	3"	88.9			9x89	36	13x89	24	19x89	18	25x89	12	32x89	8	40x89	8	50x89	6
4.1/2"	114	4"	114.3			9x114	30	13x114	24	19x114	14	25x114	8	32x114	6	40x114	6	50x114	4
		5"	139.8													40x140	4	50x140	4
		6"	165.2													40x168	4	50x168	4

## RANGE ▶ INSUL-SHEET IN ROLLS

Type	Thickness		Sheet 1.14 metre wide	
	mm	inches	format	m <sup>2</sup> /box
PL/RO 06	6	1/4"	30 x 1.14	34.20
PL/RO 10	10	3/8"	20 x 1.14	22.80
PL/RO 13	13	1/2"	14 x 1.14	15.96
PL/RO 19	19	3/4"	10 x 1.14	11.40
PL/RO 25	25	1"	8 x 1.14	9.12
PL/RO 32	32	1.1/4"	6 x 1.14	6.84
PL/RO 40	40	1.1/2"	4 x 1.14	4.56
PL/RO 50	50	2"	4 x 1.14	4.56



Self adhesive sheets available in all sizes.