

# ***K-FLEX TITAN***

## **K-FLEX TITAN**

Closed-Cell Flexible Elastomeric Foam Insulation With A Flexible Co-Extruded UV Resistant Jacketing.



# K-FLEX TITAN

## DESCRIPTION

K-FLEX TITAN is a flexible co-extruded jacketed composite material applied to K-FLEX NBR/PVC tubular Insulation. It is a polymeric jacketed material that offers excellent flexibility, abrasion and weather resistance, making it ideal for outdoor applications. This product is made in K-FLEX MALAYSIA's ISO 9001 certified manufacturing facility in Klang, Selangor.

## AVAILABILITY

K-FLEX TITAN is black in color and is available in 1/2", 3/4", 1" and 1-1/2" wall thicknesses, non-slit and pre-slit 6' length tubes. It is available in diameter sizes ranging from 1/4" I.D. to 2-1/8" I.D. across all wall thicknesses and additional IDs dependent on wall thickness.

## APPLICATIONS

K-FLEX TITAN can be used for outdoor applications with service temperatures ranging from -70 °F to +220 °F. The applications would be consistent with those recommended for K-FLEX Insul-Tube tubing. The product is used to enhance the weather and abuse resistance of the insulation tubing. K-FLEX TITAN is ideal for use on HVAC linesets and flex hose applications.

## OUTDOOR APPLICATION

K-FLEX TITAN provides excellent UV resistance and protection from weather. K-FLEX TITAN's proprietary copolymer blend jacket provides excellent protection from mechanical abuse, including incidental impact from lawn equipment such as weed wackers (plastic string type). The product has a 5-year warranty.

## INSTALLATION

**1-Step Install: No field applied protective coating or additional jacketing required.**

K-FLEX TITAN is durable (non-fracturing) and the skin is resistant to tearing from handling and the environment, safe to handle (nondusting and non-abrasive), and lightweight for an efficient installation. It is very flexible and easily conforms to bends. Its low modulus allows it to be pushed back for easy installation of fittings.

K-FLEX recommends that Insulation is installed on non-operational systems with clean, dry surfaces in ambient conditions between 40 °F and 100 °F.

Properly sized Insulation tubing can be slid over piping (tubing should be pushed, not pulled). All seams, butt joints, termination points and open ends should be sealed with an approved contact adhesive, making sure both surfaces to be joined are coated.

Vapor stops should be installed as needed. K-FLEX TITAN may be slit

longitudinally for retrofit applications. ASTM C1710, Installation Guide for Flexible Closed Cell Foams, and the K-FLEX Installation Manual should be used as comprehensive installation guides.

## RESISTANCE TO MOISTURE VAPOR

The expanded closed-cell structure and unique formulation inherently resists moisture vapor intrusion. K-FLEX TITAN needs no additional protection.

## DIRECT BURIAL APPLICATIONS

K-FLEX TITAN can be installed in direct burial application if the lines are above the water table and not in a flood zone. K-FLEX TITAN should be installed in a single layer with all butt joint and longitudinal seams completely sealed with an approved contact adhesive (see technical bulletin TA 14). Install in a PVC conduit to prevent insulation compaction or increase insulation thickness by a minimum one wall size to compensate for compaction. Backfill materials shall not contain any angular/sharp edges and shall allow for drainage. For applications below the water table or in a flood zone, install K-FLEX TITAN in a sealed conduit or trench. See technical bulletin TA 10 for additional information.



## K-FLEX TITAN

"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, United Kingdom and United States some 6,200 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

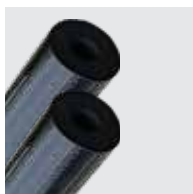


### K 414 GLUE



### UV RESISTANT TAPE





## TECHNICAL DATA

PHYSICAL PROPERTIES		K-FLEX TITAN	TEST METHODS
<b>Main Composition</b>		Flame-retarded NBR/PVC elastomeric foam with proprietary copolymer blend jacket	-
<b>Thermal Conductivity</b>	<b>20°C Mean Temp</b>	0.034 W/(m.K)	ASTM C177
<b>Density</b>		48 to 70 kg/m <sup>3</sup>	ASTM D1667
<b>Operating Temperature Range</b>		-57°C +104°C	ASTM C534
<b>Fire Performance</b>		Surface Spread of Flames : Class 1 Fire Propagation: Total Index Performance (i) ≤ 12 Sub-Index (i1) ≤ 6 Fire Performance: Class 0	Surface Spread of Flame : tested according to BS 476 Part 7:1997 Fire Propagation: tested according to BS 476 Part 6:1969
		25/50	ASTM E84
		HF-1, V-0, 5VA	UL 94
<b>Water Vapor Permeability (Dry Cup)</b>	<b>(Core Material Only)</b>	<0.01 perm-in	ASTM E96
<b>Water Vapor Permeance</b>	<b>(Jacket Material)</b>	≤0.05 perms	ASTM E96
<b>Dimensional Stability</b>		<7% Linear Shrinkage	ASTM C534
<b>UV Resistance (Artificial Aging)</b>	<b>(Jacket Material)</b>	Pass: No Changes to Surface Condition	ASTM G153

## RANGE ► K-FLEX TITAN TUBES (2 METRES)

Copper Pipe		Iron Pipe		9 • 3/8"		13 • 1/2"		19 • 3/4"		25 • 1"	
OC Inches	ø OD mm	IPS Inches	ø OD mm	size	pcs/ctn	size	pcs/ctn	size	pcs/ctn	size	pcs/ctn
1/4"	6					13x6	45	19x6	25	25x6	15
3/8"	10					13x10	40	19x10	21	25x10	15
1/2"	13			9x13	49	13x13	32	19x13	18	25x13	15
5/8"	16	1/4"	13.5	9x16	45	13x16	28	19x16	18	25x16	10
3/4"	19			9x19	40	13x19	28	19x19	16	25x19	10
7/8"	22	1/2"	21.3	9x22	32	13x22	21	19x22	15	25x22	9
1"	25					13x25	20			25x25	9
1-1/8"	28	3/4"	26.9			13x28	18	19x28	12	25x28	9
1-1/4"	32					13x32	18	19x32	10	25x32	8
1-3/8"	35	1"	33.7			13x35	15	19x35	10	25x35	8
1-1/2"	40							19x40	8		
1-5/8"	42	1-1/2"	48.3			13x42	12	19x42	8	25x42	7
2"	51					13x51	10	19x51	6		
2-1/8"	54					13x54	9				
2-3/8"	60	2"	60.3			13x60	8	19x60	5		
2-5/8"	67					13x67	7	19x67	5		

### PIPE "R" VALUES PER SQUARE FOOT (ALL SIZES ARE NOMINAL)

NOMINAL INSULATION I.D.	1/2" WALL	3/4" WALL	1" WALL
	K-Flex	K-Flex	K-Flex
1/4"	4.0	6.1	9.6
3/8"	3.6	5.6	8.5
1/2"	3.4	5.4	7.9
5/8"	3.3	5.4	7.5
3/4"	3.1	5.4	7.5
7/8"	3.2	5.4	7.2
1-1/8"	3.1	5.5	7.1
1-3/8"	3.2	5.3	7.3
1-5/8"	3.1	5.1	7.1
1-1/2" IPS	2.6	4.4	6.2
2-1/8"	3.0	4.9	6.6
2" IPS	2.9	4.8	-
2-1/2" IPS	3.0	4.6	-
2-5/8"	3.1	-	-