

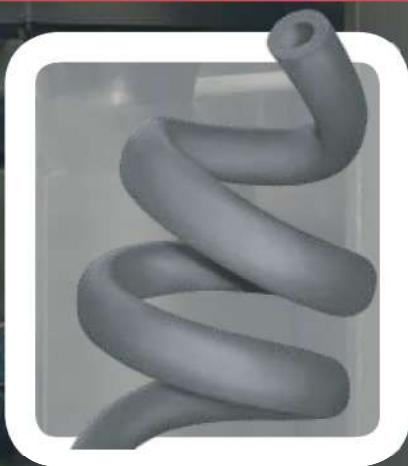
K-FLEX ST

Elastomeric insulation
for all applications,
both civil and industrial.

Applications:

Air-conditioning
Refrigeration
Industrial processes
Oil & gas

K-FLEX ST - K-FLEX ST - K-FLEX ST - K-FLEX ST - K-FLEX ST



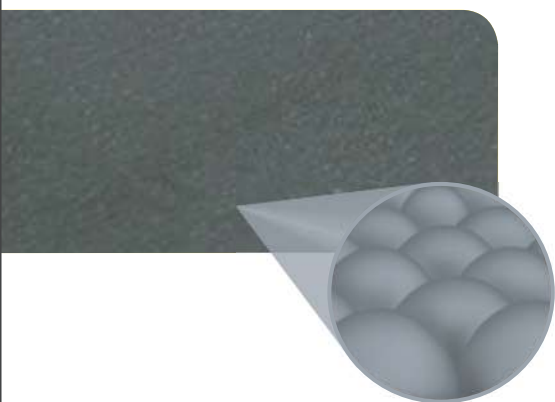
K-FLEX ST sheets

K-FLEX ST tubes



www.kflex.com

Closed Cell Products



Thermal insulating closed cell products have many advantages over the traditional open cell and products made of wool or fibreglass:

- They have a better thermal conductivity, because the air inside the closed cells has a lower mobility than that produced in open cells therefore the convective component of heat exchange is considerably lower.
- Vapour diffusion into the insulation is much lower, thus the thermal conductivity will be guaranteed for longer, even without using protective coatings.
- The mechanical properties are better.
- They promote a natural inhibition of bacterial growth, because bacteria cannot spread within the structure.

Resistant to water vapour diffusion (μ factor)



Our materials are resistant to water vapour diffusion. The higher the resistance to the penetration of water vapour, (denoted by μ), the greater the consistency of performance over a period of time. This benefit is significant when insulating cold items, where insulation thicknesses are chosen so as to achieve a surface temperature above the ambient dewpoint. Ambient humidity will try to breach the insulation in order to achieve equilibrium conditions. Because the thermal conductivity of water is 0,58 W / (mK), and therefore about 16 times higher than our insulation, any absorption of water vapour could reduce the insulation efficiency. The formation of condensation on the surface of tubing and ducting is the main cause of corrosion beneath insulation which quickly leads to damage of pipes and ducts.

Non-toxic products



Many insulation materials are porous or fibrous. In these types of materials the presence of moisture and organic matter allow the growth of bacteria, mould and fungi. Our products are resistant to this and thus contribute to the quality of the air that we breathe. We do our best to ensure that our products do not emit VOCs (volatile organic compounds) to further protect air quality by changing the ingredients and production process and ensuring that the products are from certified suppliers. In the USA our products are certified GREENGUARD by the AQS (Air Quality Science) Laboratories. This prestigious qualification in the "GREENGUARD for Children & Schools" programme ensures that the product does not emit toxic substances. In Europe there is a similar certification from the German institute EPA which has approved our product as completely harmless with regard to the emission of airborne substances. Elastomeric insulation is not made of fibrous material, and does not release harmful particles into the air. This, therefore, is regarded as an ideal product for use in public places such as schools and hospitals. It is also used in clean rooms: for the production of microchips where the minimum of dust and the absence of pollutants are a necessity for efficient production processes.

Fire Behaviour



All our products are certified and supervised at major international laboratories which guarantee that they are self-extinguishing in case of fire. Years of experience and international presence have allowed us to surpass even the strictest standards: BS 476, DIN 4102, Euroclass, Italian Class 1, Spanish M1, French NF-FEU, American ASTM and these are just some of over 1500 certifications that our materials have achieved.

K-FLEX ST



K-FLEX ST/SK
pre-cut pipe insulation
with adhesive

K-FLEX ST sheets

K-FLEX ST tubes



Elastomeric insulation
for all applications,
both civil and industrial.

Applications:

Air-conditioning
Refrigeration
Industrial processes
Oil & gas

K-FLEX ST

K-FLEX ST is suitable for all applications both civil and industrial that require the use of insulation material, providing a good quality product and value for money: refrigeration, air-conditioning, heating and plumbing, tanks, pipe fittings and water ducts.

- Wide range of tube and sheet with self adhesive & aluminium foil available.
- Light weight and flexible for easy and speedy installation with low maintenance resulting in time and cost savings.
- CFC and HCFC free with ozone depletion potential of zero
- Non-corrosive, smoke and fire rated material.
- Low thermal conductivity and high mp factor for effective control of condensation and insulating against heat loss and heat gain.
- FM Approval - Provides Assurance to owners on the Quality Consistency of K-Flex products.

K-Flex ST Tube Size Range: 2 metres

| Copper pipe | | Iron pipe | | 9 • 3/8" | 13 • 1/2" | 19 • 3/4" | 25 • 1" | 32 • 1-1/4" | 40 • 1-1/2" | 50 • 2" |
|-------------|---------|---------------|---------|----------|-----------|-----------|----------|-------------|-------------|----------|
| OD inches | Ø OD mm | I.P.S. inches | Ø OD mm | size | size | size | size | size | size | size |
| 1/4" | 6 | | | 9 x 6 | 13 x 6 | 19 x 6 | 25 x 6 | | 40 x 6 | 50 x 6 |
| 3/8" | 10 | 1/8" | 10.2 | 9 x 10 | 13 x 10 | 19 x 10 | 25 x 10 | | 40 x 10 | 50 x 10 |
| 1/2" | 12 | | | 9 x 12 | 13 x 12 | 19 x 12 | 25 x 12 | 32 x 12 | 40 x 12 | 50 x 12 |
| 5/8" | 15 | 1/4" | 13.5 | 9 x 15 | 13 x 15 | 19 x 15 | 25 x 15 | 32 x 15 | 40 x 15 | 50 x 15 |
| | | | | 9 x 19 | 13 x 19 | 19 x 19 | 25 x 19 | 32 x 19 | 40 x 19 | 50 x 19 |
| 7/8" | 22 | 1/2" | 21.3 | 9 x 22 | 13 x 22 | 19 x 22 | 25 x 22 | 32 x 22 | 40 x 22 | 50 x 22 |
| 1" | 25 | | | 9 x 25 | 13 x 25 | 19 x 25 | 25 x 25 | 32 x 25 | 40 x 25 | 50 x 25 |
| 1-1/8" | 28 | 3/4" | 26.9 | 9 x 28 | 13 x 28 | 19 x 28 | 25 x 28 | 32 x 28 | 40 x 28 | 50 x 28 |
| | | | | 9 x 32 | 13 x 32 | 19 x 32 | 25 x 32 | 32 x 32 | 40 x 32 | 50 x 32 |
| 1-3/8" | 35 | 1" | 33.7 | 9 x 35 | 13 x 35 | 19 x 35 | 25 x 35 | 32 x 35 | 40 x 35 | 50 x 35 |
| | | | | 9 x 38 | 13 x 38 | 19 x 38 | 25 x 38 | 32 x 38 | 40 x 38 | 50 x 38 |
| 1-5/8" | 42 | 1-1/4" | 42.4 | 9 x 42 | 13 x 42 | 19 x 42 | 25 x 42 | 32 x 42 | 40 x 42 | 50 x 42 |
| | | | | 9 x 45 | 13 x 45 | 19 x 45 | 25 x 45 | 32 x 45 | 40 x 45 | 50 x 45 |
| | | 1-1/2" | 48.3 | 9 x 48 | 13 x 48 | 19 x 48 | 25 x 48 | 32 x 48 | 40 x 48 | 50 x 48 |
| | | | | 9 x 51 | 13 x 51 | 19 x 51 | 25 x 51 | 32 x 51 | 40 x 51 | 50 x 51 |
| 2-1/8" | 54 | | | 9 x 54 | 13 x 54 | 19 x 54 | 25 x 54 | 32 x 54 | 40 x 54 | 50 x 54 |
| | | | | 9 x 57 | 13 x 57 | 19 x 57 | 25 x 57 | 32 x 57 | 40 x 57 | 50 x 57 |
| 2-3/8" | 60 | 2" | 60.3 | 9 x 60 | 13 x 60 | 19 x 60 | 25 x 60 | 32 x 60 | 40 x 60 | 50 x 60 |
| | 64 | | 63.5 | 9 x 64 | 13 x 64 | 19 x 64 | 25 x 64 | 32 x 64 | 40 x 64 | 50 x 64 |
| 2-5/8" | 67 | | | 9 x 67 | 13 x 67 | 19 x 67 | 25 x 67 | 32 x 67 | 40 x 67 | 50 x 67 |
| | 70 | | | 9 x 70 | 13 x 70 | 19 x 70 | 25 x 70 | 32 x 70 | | |
| | | | | 9 x 73 | 13 x 73 | 19 x 73 | 25 x 73 | 32 x 73 | 40 x 73 | |
| 2-7/8" | 76 | 2-1/2" | 76.1 | 9 x 76 | 13 x 76 | 19 x 76 | 25 x 76 | 32 x 76 | 40 x 76 | 50 x 76 |
| 3-1/8" | 80 | | | 9 x 80 | 13 x 80 | 19 x 80 | 25 x 80 | 32 x 80 | 40 x 80 | |
| | | 3" | 88.9 | 9 x 89 | 13 x 89 | 19 x 89 | 25 x 89 | 32 x 89 | 40 x 89 | 50 x 89 |
| | 102 | | | | 13 x 102 | 19 x 102 | 25 x 102 | 32 x 102 | 40 x 102 | 50 x 102 |
| 4-1/8" | 105 | | | | 13 x 105 | 19 x 105 | 25 x 105 | 32 x 105 | 40 x 105 | 50 x 105 |
| | | | | | 13 x 108 | 19 x 108 | 25 x 108 | 32 x 108 | | |
| | | 4" | 114.3 | | 13 x 114 | 19 x 114 | 25 x 114 | 32 x 114 | 40 x 114 | 50 x 114 |
| | 125 | | | | 13 x 125 | 19 x 125 | | | | |
| | 133 | | | | 13 x 133 | 19 x 133 | 25 x 133 | 32 x 133 | | 50 x 133 |
| | | 5" | 140 | | 13 x 140 | 19 x 140 | 25 x 140 | 32 x 140 | 40 x 140 | 50 x 140 |
| | | | | | 13 x 160 | 19 x 160 | 25 x 160 | 32 x 160 | 40 x 160 | 50 x 160 |
| | 168 | 6" | 168 | | 13 x 168 | 19 x 168 | 25 x 168 | 32 x 168 | 40 x 168 | 50 x 168 |

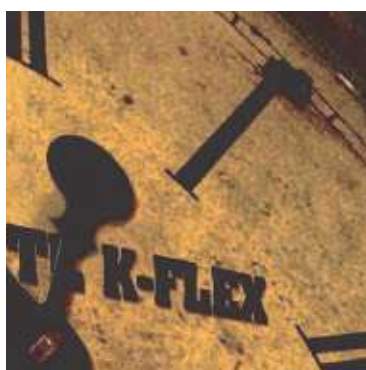
K-Flex ST Sheet rolls



Self adhesive Sheets
available in all sizes.

| Type | Thickness | | Sheet 1 metre wide | | Sheet 1.22 metre wide | | Sheet 1.5 metre wide | |
|----------|-----------|--------|--------------------|---------------------|-----------------------|---------------------|----------------------|---------------------|
| | mm | inches | format | m ² /box | format | m ² /box | format | m ² /box |
| PL/RO 06 | 6 | 1/4" | 30 x 1 | 30 | 30 x 1.22 | 36.60 | 30 x 1.5 | 45 |
| PL/RO 10 | 10 | 3/8" | 20 x 1 | 20 | 20 x 1.22 | 24.40 | 20 x 1.5 | 30 |
| PL/RO 13 | 13 | 1/2" | 14 x 1 | 14 | 14 x 1.22 | 17.08 | 14 x 1.5 | 21 |
| PL/RO 19 | 19 | 3/4" | 10 x 1 | 10 | 10 x 1.22 | 12.20 | 10 x 1.5 | 15 |
| PL/RO 25 | 25 | 1" | 8 x 1 | 8 | 8 x 1.22 | 9.76 | 8 x 1.5 | 12 |
| PL/RO 32 | 32 | 1-1/4" | 6 x 1 | 6 | 6 x 1.22 | 7.32 | 6 x 1.5 | 9 |
| PL/RO 40 | 40 | 1-1/2" | 4 x 1 | 4 | 4 x 1.22 | 4.88 | 4 x 1.5 | 6 |
| PL/RO 50 | 50 | 2" | 4 x 1 | 4 | 4 x 1.22 | 4.88 | 4 x 1.5 | 6 |

Worldwide Leader
in the production
of **Elastomeric Insulation**
for **Energy Saving**



K-Flex ST (Class 0)

K-Flex ST closed cell elastomeric - thermal insulation

K-Flex ST tubes & Sheet

Technical Data

| | |
|--|--|
| Temperature range | -40 °C* max +110 °C (ST tube) -40 °C* max +85°C (ST sheet) |
| Thermal conductivity λ W/(m.K) EN 12667 (DIN 52612) EN ISO 8497 (DIN 52613) | -20 °C = 0.031 W/(m.k) 0 °C = 0.033 +20 °C = 0.035 +40 °C = 0.037 |
| Permeability EN 12086 (DIN 52615) | $\mu \geq 10,000$ |
| Water absorption rate ASTM C209 | $\leq 0.1\%$ (percent by volume in %) |
| Dimension Stability GB 8811-88 | $\leq 10.0\%$ |
| Corrosion problem | EN 13468; ph neutral (7 ± 1) |
| Noise Reduction (DIN 4109) | ~32dB |
| Fire BS 476 part 6 & 7 GB 8624 EN 13501-1 | Class 0 Fire Service Department for insulation of ventilation ductwork or pipework B1 Euroclass B, s3, d0 |
| Smoke Visibility ISO 5659 | Pass |
| Smoke Toxicity | IMO International Code for Application of Fire Test Procedure: Part 2 -Smoke and Toxicity Test, IMO MSC 61 (67) |
| Fungal Resistance | ASTM G21 |
| Bacterial Resistance | ASTM E2180 |
| GWP ODP | Zero |
| Dust and Fiber | No |
| VOC Emissions | A+ French Regulation DEVP0908633A, DEVP0910046A |



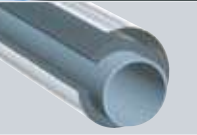


* For industrial applications, product can be applied down to -198°C; for applications below -40°C please contact our technical department
K-Flex reserves the right to change data and technical requirement without notice



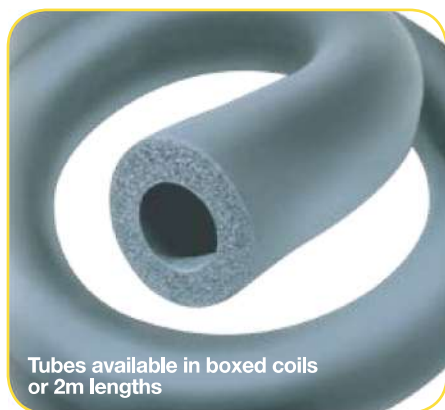
Fungal Resistance
Bacterial Resistance

SYSTEMS AND FINISHES

Special finishes and systems to give added value to our insulating materials.

| | PRODUCT | COMPOSITION | CHARACTERISTICS |
|---|------------------------------|--|---|
|  | K-FLEX AL CLAD SYSTEM | Plastic foil + aluminum foil + UV protection films Thickness: ≈ 300 microns | <ul style="list-style-type: none"> - Weather resistant (UV) - Excellent mechanical strength - Resistant to aggressive chemicals (acids, bases) - Full range of accessories - Aesthetic appearance and functional value |
|  | K-FLEX IN CLAD SYSTEM | Thermoplastic polymer black and grey Thickness: $1.2 \pm 0.2\text{mm}$ | <ul style="list-style-type: none"> - Specified for the Oil & Gas Industry - Full range of accessories - Resistant to salts, fats, oils and UV - Approved by DNV, Lloyds, Factory Mutual, ABS |
|  | K-FLEX IC CLAD SYSTEM | Woven fibreglass * Density: $\approx 210 \text{ g/m}^2$ Thickness: 0.18 mm | <ul style="list-style-type: none"> - Resistant to high temperatures - Excellent mechanical strength - Full range of accessories |
|  | K-FLEX COLOR SYSTEM | Coated in different colours | <ul style="list-style-type: none"> - Weather resistant (UV) - Flexible and easy to apply - Wide range of colours available |
|  | K-FLEX ALU | Multilayer Aluminium - Polyester | <ul style="list-style-type: none"> - Good mechanical strength - Excellent resistance to water vapour |

* IC CLAD SILVER with aluminized glass cloth



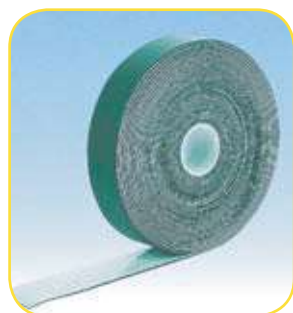
Tubes available in boxed coils or 2m lengths



Insulation Sheets in rolls



Insulation Sheets



Self-Adhesive anticondensation tapes



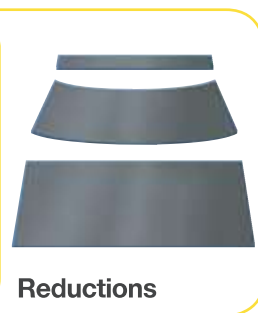
Insulating Pipe Supports



Elbow



"T" Fittings



Reductions

Preformed fittings (Elbow, "T", reductions, valves, flanges etc...)



Adhesive Products



Pre-cut pipe insulation with a special sensitive adhesive



Self adhesive Flexible elastomeric sheets with or without reinforced mesh



Glue



Aluminium Tape

Distributor



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