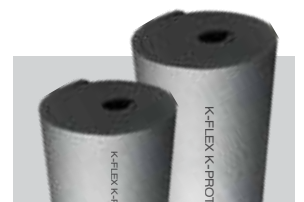


K-FLEX K-PROTECT



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K-Flex Closed-Cell Cross Linked Polyethylene Foam Insulation With Aluminium Foil For Thermal & Acoustic Insulation Applications.



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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 **K-PROTECT CLOSED CELL CROSS-LINKED POLYETHYLENE FOAM INSULATION WITH ALUMINIUM FOIL**.

K-PROTECT is designed taking into account the stringent norms of internationally accepted properties for the top-of-the-line Insulation materials. **K-FLEX K-PROTECT** is an answer for various application areas requiring Low Thermal Conductivity and fire class approved product with very flexible yet tough insulation material which offers ease of installation along with durable life span.

K-FLEX K-PROTECT is classified as Class 0 complying to BS 476 Part 6 & 7. Thus offering an excellent fire resistance and use in multiple applications areas where the fire safety is paramount.

K-FLEX K-PROTECT 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.

TECHNICAL BENEFITS & ADVANTAGES

- > **K-PROTECT** Insulation product has been tested and certified for its properties by third party international labs. The **K-PROTECT** product is designed for the world market taking into consideration the various requirements laid down by technical standards in various countries.
- > The completely closed cell structure by cross-linking polymers ensure a consistent insulation property in the body of Insulation. It offers the best resistance to water vapour ingress thus maintain the thermal conductivity of the Insulation
- > Comes with heat bonded factory laminated alufoil for long life. The **K-PROTECT** takes care of UV rays, mechanical damages as well as the acts as a barrier for water vapours.
- > **K-PROTECT** is technically superior Insulation due to low thermal conductivity 23°C @ 0.032 w/m.K and high resistance to water vapour with μ value $> 20,000$
- > Fire safety is of paramount importance when it comes to any building materials. The **K-PROTECT** is complying with BS 476 Part 6 & 7 norms and is classified as Class 0 product.
- > **K-PROTECT** has a main objective of help the energy efficiency & sustainability of the project. **K-PROTECT** is designed with Zero VOC, It is formaldehyde free, it offer excellent resistant to mould growth and has a ozone depletion potential of zero. **K-PROTECT** is CFC HCFC free product thus it is an environmental friendly Green product.
- > **K-PROTECT** is a fibre free and dust free material, and help maintain the clean air quality in the conditioned spaces as well, it doesn't cause any health hazards
- > Being designed with optimal effectiveness the **K-PROTECT** Insulation is cost effective. Being flexible and easy to apply, saves the installation costs and time involved in installation.
- > **K-PROTECT** is a flexible Insulation system. Being flexible it can be installed at ease on various surfaces. The flexibility reduces the installation time and simpler installation saves the cost of installation.
- > **K-PROTECT** with its closed cell structure has an excellent sound absorption properties.

K-PROTECT

"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.

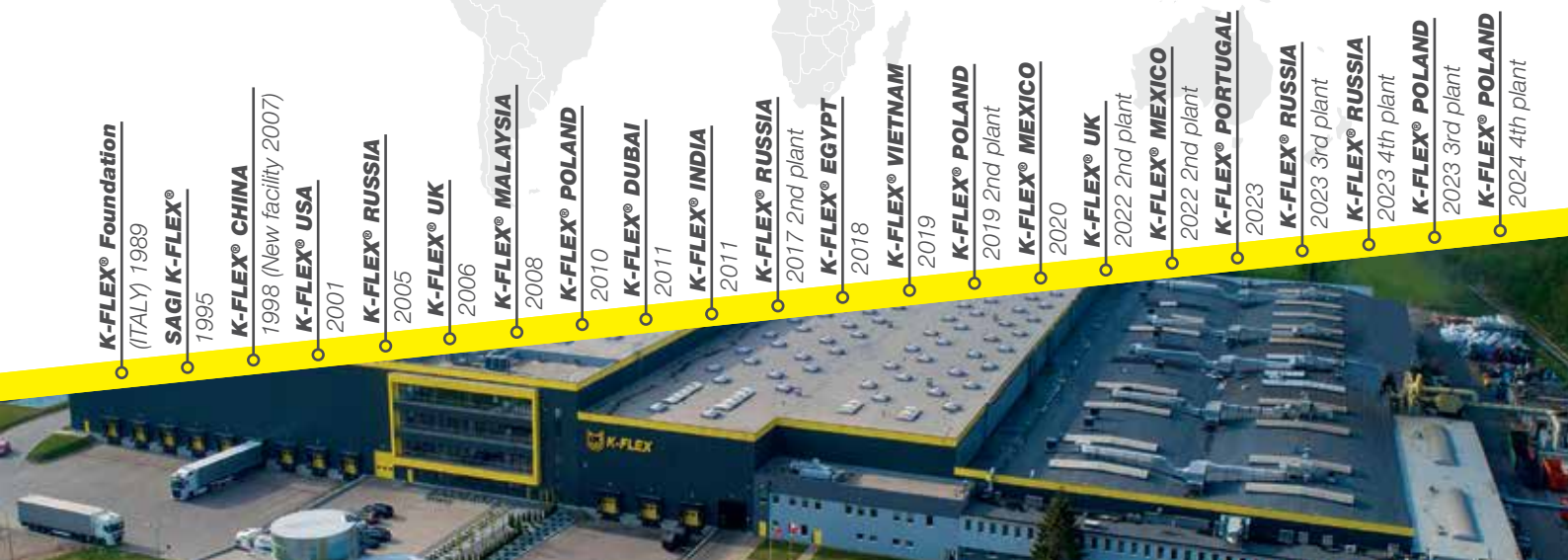
K-FLEX is committed to ensuring its products comply with the fire safety and industry-wide safety standards.

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

PE FOAM TAPE



PIPE SUPPORT



K-414 Adhesive



APPLICATION AREAS

K-PROTECT can be used for air conditions ducting, piping Insulation, wall Insulation, acoustic Insulations, underdeck Insulations, tank Insulations and many other interior applications.

The K-PROTECT can be used in HVAC, Refrigeration, Pharmaceuticals, Solar Systems, Automotive, Hospitals, Industrial PEB's, Room & Machines Acoustics, Plumbing, OEM's, Automotives, Marine & Shipbuilding Industries etc.

TECHNICAL SPECIFICATIONS

| K-FLEX ► K-PROTECT | | |
|---|--|--|
| Property | Value/Assessment | Special Remark |
| Density | 30 kg/m ³ ±10% (foam core only) | |
| Color | Grey (Foam only) | |
| Operating Temperature | -40 to 115 deg C | |
| Thermal Conductivity | 0.0322 W/m.k @ 23 deg C 0.0361 W/m.k @ 36 deg C | Tested acc to ASTM C 518 |
| Water Vapour Diffusion Transmission Factor, μ | > 20,000 | Tested acc to BS EN 12086 |
| Noise Reduction Coefficient | 0.30 for 25mm thickness | Tested acc to ASTM C 423 |
| Physical Properties | | |
| Tensile Strength | 44 psi | Tested acc to ASTM D 412 |
| Ultimate Elongation | 83% | Tested acc to ASTM D 412 |
| 50% Modulus | 40 psi | Tested acc to ASTM D 412 |
| 100% Modulus | 45 psi | Tested acc to ASTM D 412 |
| Tear Strength | 16 lbf/in | Tested acc to ASTM D 624 |
| Compression Deflection | 10% Deflection - 6.8 psi 25% Deflection - 12.1 psi 50% Deflection - 91.7 psi | Tested acc to ASTM D 1621 |
| UV / Weathering & Ozone Resistance | Excellent | |
| Fire Performance | | |
| Burning Test | Flame Spread Index : < 25 Smoke Developed Index : < 50 | Tested acc to ASTM E 84 |
| Fire Rating | Class 0 | Tested acc to BS 476 Part 6 & Part 7 BOMBA Malaysia |
| FM Approvals | Approved | Approval Class - 4924 |
| Burning Test | HF-1 | Tested acc to UL 94 |
| AWTA 1530 Part 3 | Ignitability 0 Spread of Flame Index 0 Heat Evolved Index 0 Smoke Developed Index 2 | |
| Other Certificates | | |
| Resistance to Fungal | Zero Growth | Tested acc to ASTM G 21 |
| Green Star Rating | Low VOC Emitting | Tested acc to ASTM D 5116 |
| Green Star Rating | Low VOC Emitting | Tested acc to ISO 16000 |
| Environmental Product Declaration (EPD) | Verified by UL | |

PACKING DATA

| Thickness (mm) | Length (m) | Width (m) | Area/Roll (Sq. Mtr.) | Loading/Container (40HC) |
|----------------|------------|-----------|----------------------|--------------------------|
| 6 | 50 | 1.2 | 60 | 105 |
| 10 | 25 | 1.2 | 30 | 114 |
| 13 | 20 | 1.2 | 24 | 174 |
| 16 | 20 | 1.2 | 24 | 114 |
| 20 | 15 | 1.2 | 18 | 105 |
| 25 | 15 | 1.2 | 18 | 105 |
| 32 | 2.4 | 1.2 | 2.88 | 110 |
| 40 | 2.4 | 1.2 | 2.88 | 110 |
| 50 | 2.4 | 1.2 | 2.88 | 110 |

| Thickness (mm) | Length (m) | Width (m) | Area/Roll (Sq. Mtr.) | Loading/Container (40HC) |
|----------------|------------|-----------|----------------------|--------------------------|
| 6 | 80 | 1.2 | 96 | 78 |
| 10 | 60 | 1.2 | 72 | 69 |
| 13 | 60 | 1.2 | 72 | 49 |
| 16 | 60 | 1.2 | 72 | 44 |
| 20 | 45 | 1.2 | 54 | 44 |
| 25 | 30 | 1.2 | 36 | 49 |
| 32 | 2.4 | 1.2 | 2.88 | 110 |
| 40 | 2.4 | 1.2 | 2.88 | 110 |
| 50 | 2.4 | 1.2 | 2.88 | 110 |



K-FLEX reserves the right to change data and technical requirements without notice. Please refer to sales personnel for further loading quantity.