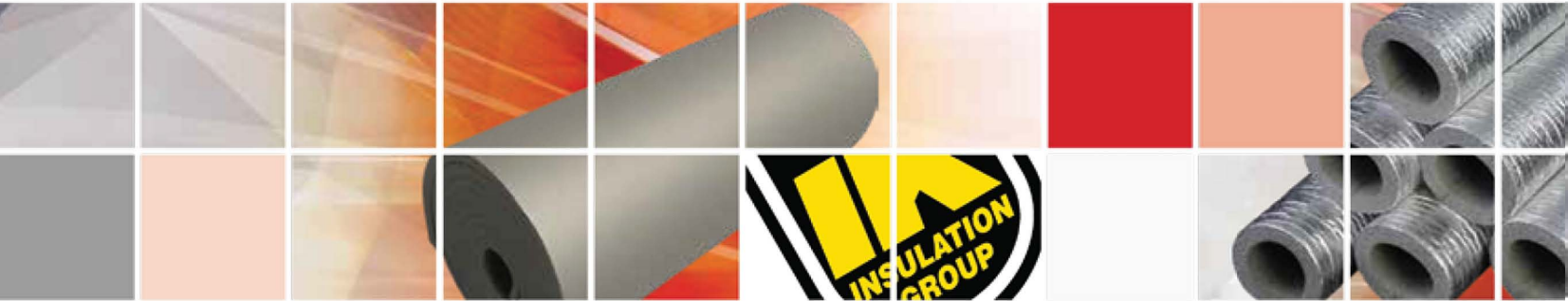


K-FLEX®



K-FLEX® K-PROTECT



K-FLEX cross linked closed cell polyolefin foam insulation
for thermal & acoustic insulation applications



K-FLEX MALAYSIA SDN BHD

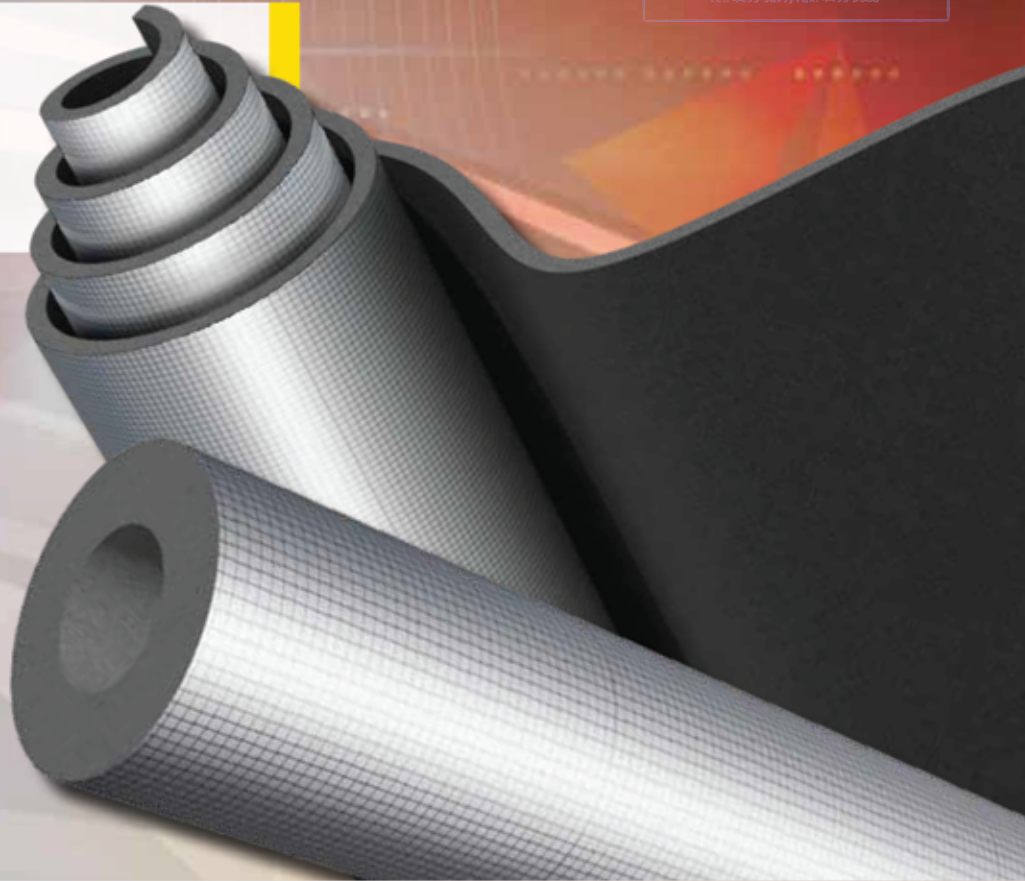
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K-FLEX® K-PROTECT



K-FLEX® K-PROTECT ▶ INTRODUCTION & DESCRIPTION

K-FLEX MALAYSIA, part of **L'ISOLANTE K-FLEX S.p.A.**, Italian multinational company specialized in manufacturing of elastomeric thermal & acoustic insulation materials and a worldwide market leader presents the **K-PROTECT** a Cross Linked Closed Cell Polyolefin Foam Insulation sheets & pipes. **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 still 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. **K-PROTECT** is ASTM E-84 Approved. Thus offering Best-in-the-class excellent Fire Resistance and use in multiple applications areas where the fire safety is paramount.

K-PROTECT is manufactured at our World Class Manufacturing Facility in Malaysia with machineries & setup capable of manufacturing the products adhering to strict international norms. **K-FLEX®** engages the best quality Raw Materials, Manufacturing Practices and Quality Management system to ensure a Superior quality end product.

K-FLEX® K-PROTECT ► TECHNICAL BENEFITS & ADVANTAGES

- **CLOSED CELL Structure** - 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.
- **Protection** - Comes with heat bonded factory laminated alufoil for long life. The **K-PROTECT** with Alufoil takes care of UV rays, Mechanical damages as well as the acts as a barrier for water vapours.
- **Flexible** - **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.
- **Low Thermal Conductivity** - **K-PROTECT** is Technically superior insulation due to low thermal conductivity @ 0.0032 w/m.K
- **High resistance to water vapour** with μ value > 12000
- **Sustainability** - **K-PROTECT** has a main objective of help the Energy Efficiency & Sustainability of the project. **K-PROTECT** is designed with Zero PVC, It is Formaldehyde free, it offer excellent resistant to Mould Growth and has a Ozone Depletion Potential of Zero. **K-PROTECT** is CFC HCHC free product thus it is an environmental friendly Green product.
- **Quality** - **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.
- **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** with its closed cell structure has an excellent sound absorption properties.
- 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.
- The **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



K-FLEX® K-PROTECT ▶ 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, Automotive, Marine & Shipbuilding Industries to name a few.

K-FLEX® K-PROTECT ▶ PACKING DATA

K-FLEX® K-PROTECT ▶ SHEET			
Thickness mm	Type	Roll Size (Width x Length) Mtr x Mtr	Total Sqm Per Roll Sqm
9	Roll	1.2 x 20	24.00
10	Roll	1.2 x 20	24.00
12	Roll	1.2 x 20	24.00
13	Roll	1.2 x 20	24.00
15	Roll	1.2 x 15	18.00
19	Roll	1.2 x 10	12.00
25	Roll	1.2 x 8	9.60
32	Sheet	1.2 x 2.4	17.28
40	Sheet	1.2 x 2.4	14.40
50	Sheet	1.2 x 2.4	11.52
Tolerance Thickness: ± 0.5 -1.5 mm			
Length: ± 0.03 mtrs.			



K-FLEX® K-PROTECT ▶ TUBES			
15 mm Thick x ID	20 mm Thick x ID	25 mm Thick x ID	32 mm Thick x ID
15 x 12	20 x 12	25 x 12	32 x 12
15 x 16	20 x 16	25 x 16	32 x 16
15 x 20	20 x 20	25 x 20	32 x 20
15 x 22	20 x 22	25 x 22	32 x 22
15 x 25	20 x 25	25 x 25	32 x 25
15 x 28	20 x 28	25 x 28	32 x 28
15 x 30	20 x 30	25 x 30	32 x 30
15 x 32	20 x 32	25 x 32	32 x 32
15 x 35	20 x 35	25 x 35	32 x 35
15 x 42	20 x 42	25 x 42	32 x 42
15 x 48	20 x 48	25 x 48	32 x 48
15 x 54	20 x 54	25 x 54	32 x 54
15 x 60	20 x 60	25 x 60	32 x 60
15 x 67	20 x 67	25 x 67	32 x 67
15 x 76	20 x 76	25 x 76	32 x 76
15 x 80	20 x 80	25 x 80	32 x 80
15 x 89	20 x 89	25 x 89	32 x 89
15 x 102	20 x 102	25 x 102	32 x 102
15 x 115	20 x 115	25 x 115	32 x 115
15 x 140	20 x 140	25 x 140	32 x 140
15 x 168	20 x 168	25 x 168	32 x 168
Tolerance Thickness: ± 1-1.5 mm			
Length: ± 0.03 mtrs.			

K-FLEX® K-PROTECT ► TECHNICAL SPECIFICATIONS

K-FLEX® K-PROTECT ► SHEETS & PIPES

Material	Crosslinked Closed Cell polyolefin foam with Alufoil
Density	30 Kg/m ³ ±10%
Colour	Beige/ Grey
Thermal Conductivity	0.0322 W/m.K at 0 Deg C
ASTM C518	0.0341 W/m.K at 23 Deg C
DIN 52615	0.0381 W/m.K at 46 Deg C
Operating Temperature	- 40 to 115 Deg C
Fire & Smoke Behaviour	BS 476 part 6 & 7, Class "0"
Horizontal Burning Test UL 94 HBF	Approved (HF-1) (E193277)
ASTM E84	Should comply NFPA 90A & B Flame spread index <25 Smoke Developed index <50
BS 6853 Annex B: Smoke Toxicity	BCA Group Number: 1 Smoke Index: ≤250
Smoke Toxicity	Should comply NFPA 90A & B
Tear Resistance ASTM D571	0.8 N/mm (DIN53507) MD, 0.38 Mpa for Insulation with Alufoil 0.8 N/mm (DIN53507) CD, 0.27 Mpa for Insulation with Alufoil
Tensile Testing	0.30 Mpa ASTM D412-15a
Elongation At Break (ISO 1798)	160 % MD and 60 % for Insulation with Alufoil 200% CD and 60 % for Insulation with Alufoil
UV & Weathering	Excellent
Water Vapour Permeability ISO E96	2.298 x 10 ⁻¹⁵ kg/Pa.s.m as per ISO E96
Permeability Resistance Factor	> 12000 for foam with alufoil
Water Absorption by Volume EN 13472	<0.1% v/v
Resistance to Fungi ASTM G21	Zero Growth
Ozone Resistance	Excellent
UV resistant	Excellent
Noise Reduction Coefficient AS 1045	0.20 for 12mm foam thickness 0.30 for 25mm foam thickness
Volume % of Closed Cell BS 4370 Part 2	>90%
Sound Transmission Class for 9mm foam with 12mm substrate sheet ISO 140 / ASTM E 413	40 dB

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

