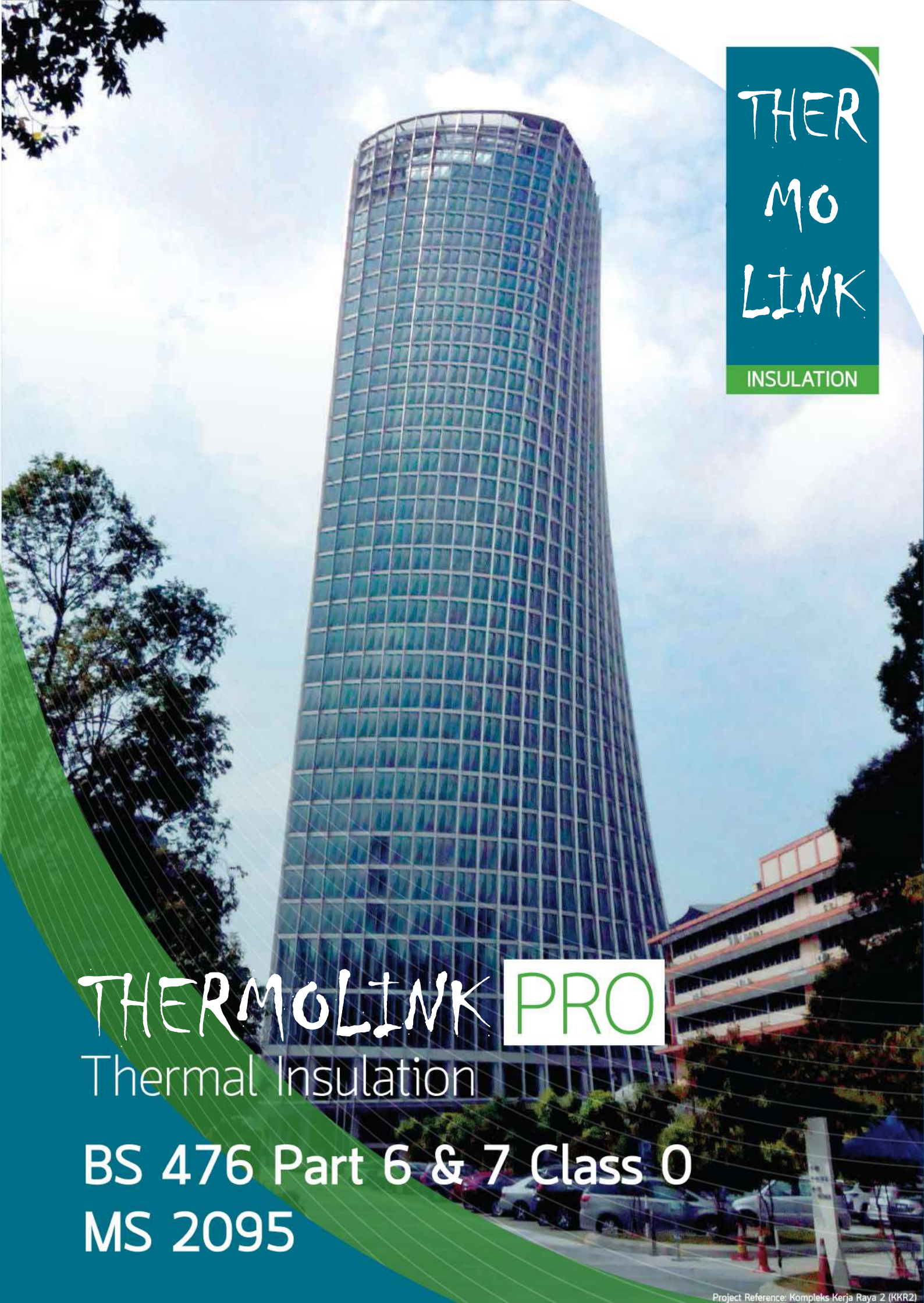


THERMO LINK

INSULATION

THERMOLINK PRO

Thermal Insulation

BS 476 Part 6 & 7 Class 0

MS 2095

Project Reference: Kompleks Kerja Raya 2 (KKR2)

Thermolink Pro

Project Reference: Kuala Lumpur Convention Centre

Thermolink Cross-linked Polyethylene foam finds many applications in the HVAC, plumbing, construction and roofing industries. It is used for insulation of hot and cold water pipes, air ducts, computer raised floor, wall and floor insulation, roofing structures, heat exchangers, split air conditioning systems, and many internal components found in large air handling units. In transportation markets, Thermolink can also be found in automotive, rail and marine applications.

A good insulation product has always been determined by its thermal conductivity and water resisting performance until now. Fire safety has increasingly gained importance throughout the years and is a required safety standard by fire departments around the world.

Thermolink Pro is a line of product that complies with the safety standards of Class 'O' in accordance to British Standards (BS) 476 part 6 and part 7. To satisfy the Class 'O' classification, the material must adhere to the various testing methods of part 6 and 7.

AtThermolink Global., besides providing quality, comfort and convenience to our customers, we also emphasize on safety of the products. We take fire hazard very seriously, by making our products comply with Class O certification, it can be the deciding factor in determining whether a fire can be contained and extinguished quickly or not. Our foams are low in smoke emission and toxicity, the leading cause of death during a fire outbreak. In most cases, pipes and ducts are the carrier of flames that spreads to other parts of a building as they are interconnected throughout the building, therefore it is imperative for these materials to strictly adhere to the fire standards.

Why Thermolink ?

Thermolink Cross-linked Polyethylene foam contributes to both the Green Building Index (GBI) and the Leadership in Energy and Environmental Design (LEED) certification. We are proud to be part of the Energy Commisions Building Malaysia and Kompleks Kerja Raya 2 (KKR2), both platinum rated buildings by GBI standards. We are also a proud partner of the Malaysian Green Building Confederation.

Energy Efficiency

Heat gain is the number one energy-draining nemesis in hot climates. Heat energy naturally transfers from hot areas to cooler ones. Thermolink's foam excellent insulation properties improves energy efficiency by minimizing unnecessary heat gain, reducing energy consumption. This will help achieve long lasting energy savings and increase overall energy efficiency of the building

Indoor Environment Quality

Thermolink's foam are non-toxic and contains no volatile organic compound materials. It is non-fibrous materials which alleviates any chance of fibre erosion. In addition to having good resistance against ozone and UV, it is also fire retardant and emits minimal, non-harming levels of smoke and toxicity.

Environmental Friendly

Thermolink's foam are certified by the Australian Green Star standard, which means they are free from toxic chemicals and heavy metals. Our foam is also produced without the use of CFC, HCFC, VOC, or HC's. Unlike fibre glass insulation, our foam has minimal, non-harming levels of cancer inducing, formaldehyde gasses.

World-Class Standards

Thermolink's foam has been tested on many international standards:

> British Standard (BS)	> DIN standard	> ASTM	> UL Standard	> ISO
> AS/NZS	> JIS Standard	> Australian Green Star	> European Standard (EN)	> MS 2095

Project Reference: Energy Commission Building (Diamond Building)

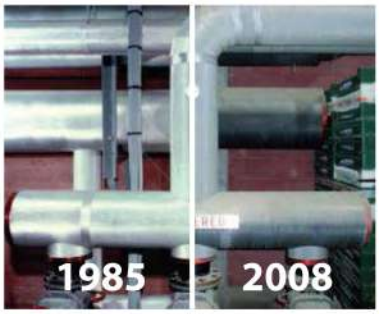
Thermolink AirPro

State-of-the-art Technology

Our AirPro line of foam are specifically engineered for air-conditioning duct insulation among other applications. Its flexibility allows it to bend over the corners of air-conditioning ducts with ease. AirPro helps regulate temperature in between the duct and the temperature outside, with minimal thermal conductivity. This minimizes energy loss and reduces energy consumption and ultimately enhances energy efficiency.

Convenience at your fingertips

Every Thermolink AirPro polyethylene foam comes laminated with reinforced aluminium foil and is also available with in-house factory coated industrial strength adhesive for added convenience. Unlike conventional tissue interlayer glue, which maybe easily detachable in the presence of water moisture, our adhesive is waterproof and is the longest lasting in the market.



Unrivaled Reliability

One of Thermolink's project, Vintage S.p.A., Italy, in 1985 was revisited after operation 23 years later in 2008. Thermal conductivity performance value of our foam remained constant despite all those years. This itself is a solid testimony to the quality of our product.

Property	Unit	1985	2008
Thermal conductivity	W / mK	0,0394	0,0394

Size Available

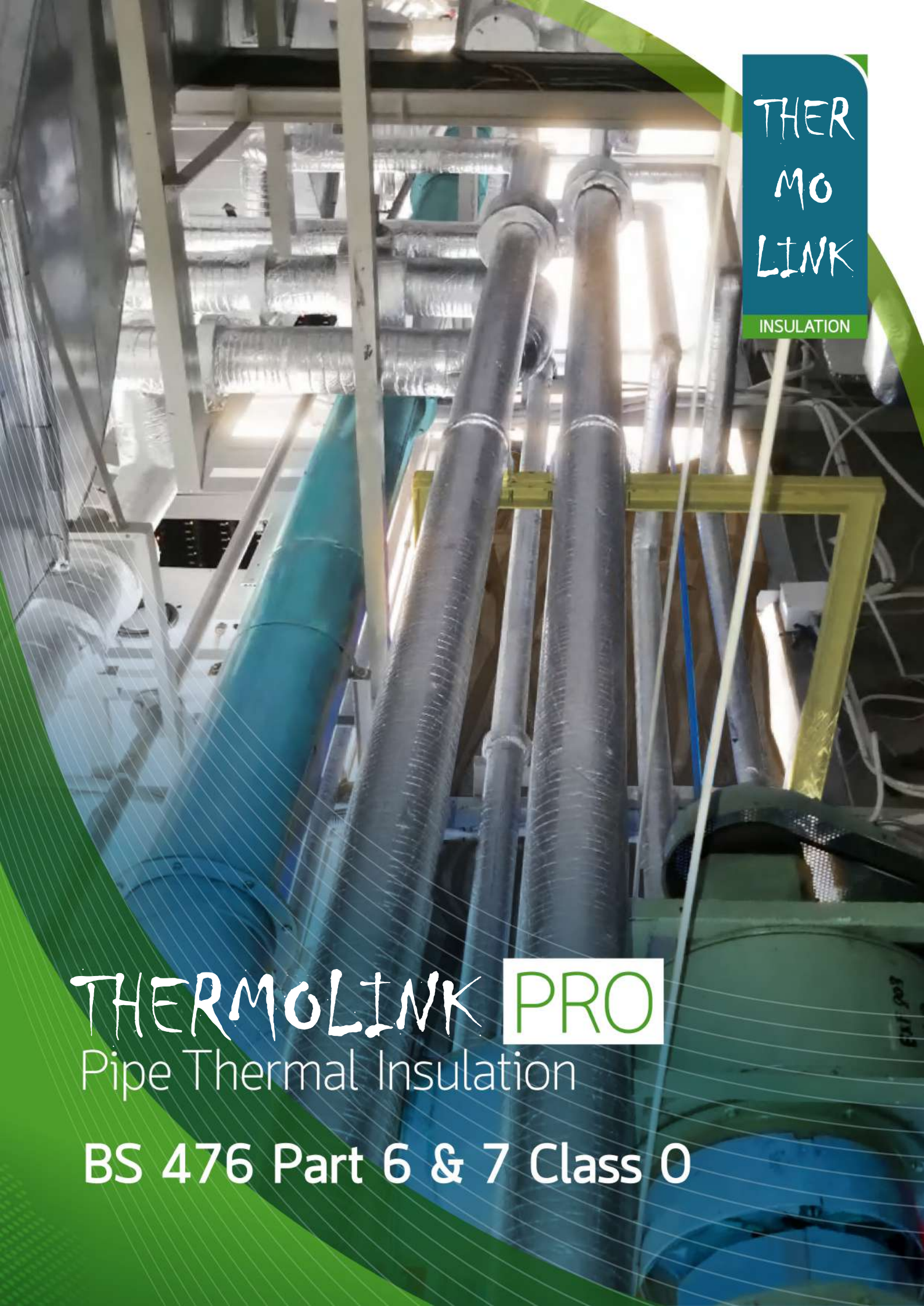
Thickness	Size
9 mm	1.2x20 M
15 mm	1.2x20 M
20 mm	1.2x20 M
25 mm	1.2x15 M
30 mm	1.2x2.3 M
40 mm	1.2x2.3 M

Other thicknesses and dimensions available upon request

Standard width is 1.2m

Installation process

Our flexible AirPro foam allows for an effortless installation process. Just bend it around the duct and let the built in glue do the work.
Scan the QR code on the right to witness the convenience of installing our AirPro insulation polyethylene foam.



THERMO LINK

INSULATION

THERMOLINK PRO

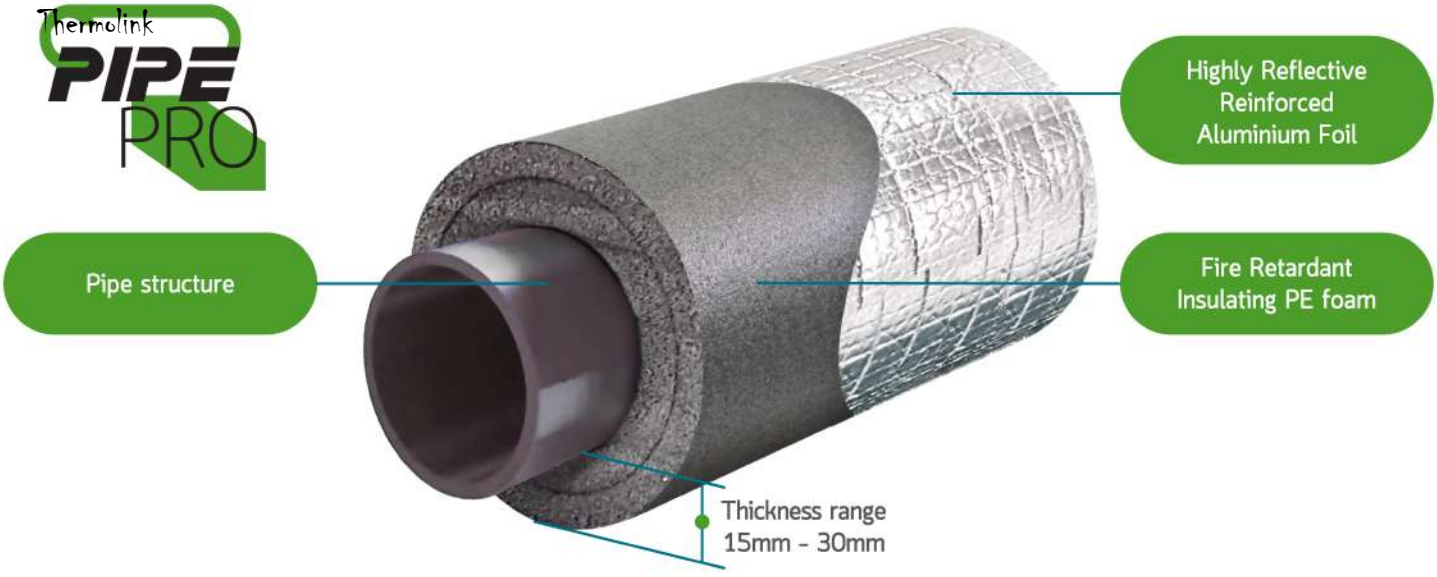
Pipe Thermal Insulation

BS 476 Part 6 & 7 Class 0

Thermolink PIPEPRO™

Thermolink is specially engineered to help reduce heat transfer by creating an insulation barrier between your piping system and the atmosphere in order to prevent moisture condensation. The low thermal conductivity properties of Thermolink PipePro also helps reduce energy loss, allowing the piping system to work more efficiently with less energy usage. The closed-cell nature of Thermolink PipePro means it is naturally water resistant, preventing the growth of fungi. All Thermolink PipePro products are tested under the stringent fire safety test of BS 476 Part 6 & 7 standard, in which we have achieved the highest rating of Class 0.

Tested under **BS 476 part 6 & 7** with **Class 0**



Thermolink PipePro advantages

- High durability with constant performance for the entire service life
- Pre-formed to tubes for quick and easy installation
- Reduces energy consumption by minimizing unnecessary heat gain/ loss
- Built-in fire retardancy with Class 0 fire safety rating
- Closed-cell structure of PE foam prevents water absorption
- Free of any heavy metals, VOCs, HBFCs, CFCs and HCFCs

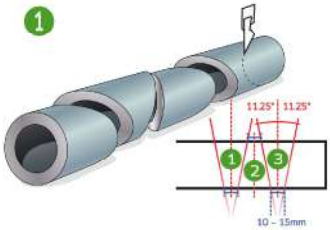
Various fittings & conversions

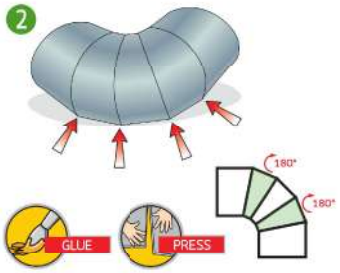
The pre-formed tube shape and lightweight nature of Thermolink PipePro means it can be easily slipped over pipes, allowing for a quick and easy installation. Plus, the excellent formability of PE foam allows it to be easily converted into tees and elbow joints of your piping system, making it extremely versatile to fit any of your projects. Saving you both time and cost.

Installation guide & video

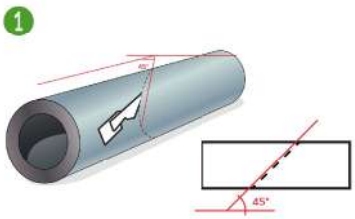
Refer to our installation guide and videos for more detailed steps on the fitting and conversion.

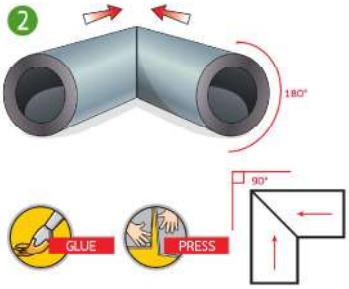
CURVED



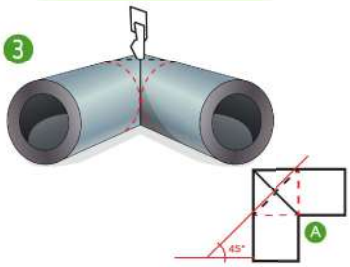


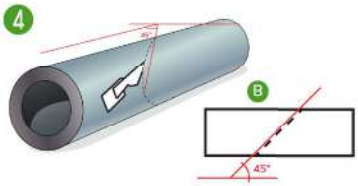
RIGHT-ANGLED

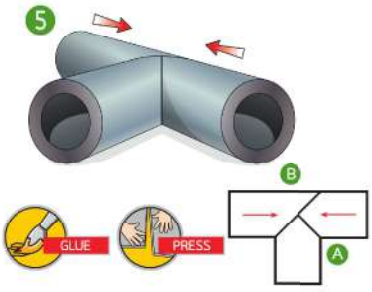




T-JOINT







Installation accessories

It is important to properly glue and seal installation work for best results, avoiding large losses of energy. A good bond would ensure durability and resistant to weathering.

We recommend using **contact adhesive** glue for our PipePro installation. Contact adhesive is a synthetic polymer-based glue which is ideal for bonding PE foam together. It can be easily purchased from your local hardware store.

To seal the PipePro connecting joints, we recommend using our Thermolink **DuraSeal** foil tape which are made with acrylic adhesive as opposed to rubber adhesive. This will not only allow for a stronger bond but also a much greater longevity once they cure and stick to the surface of Thermolink

TECHNICAL DATA SHEET

Thermolink® Sheet and Tube

Material:	Physically crosslinked closed cell polyolefin foam with factory applied reinforced 9um aluminium foil and optional pressure sensitive adhesive backing
Density:	25 kg/m3 (foam core only)
Thermal Conductivity: (ASTM C518)	0.032 W/m.°K (@ 23°C mean temperature)
Water Vapour Permeability: (ASTM E96)	8.19 x 10-15 kg/Pa.s.m (0.0029 mg.m/N.h)
Water Vapour Permeance:	3.3 x 10^{-4} g/MN.s
Permeability Resistance Factor:	$\mu > 20,000$
Water absorption by volume (JIS K6767):	After 28 day <0.8%
Resistance to fungi: (ASTM G21)	Zero Growth
Ozone Resistance:	Excellent
UV Resistance:	Excellent
VOC Emission Rate: (ASTM D5116)	Low VOC emitting (“Green Star”)
Noise Reduction Coefficient: (ISO 354)	0.20 (12mm foam thickness) 0.30 (25mm foam thickness)
Operating Temperature Range:	-80 °C ~ +100 °C (no adhesive)

FIRE AND SMOKE PERFORMANCE		
ASTM C411:		COMPLIES (NFPA 90A & B)
ASTM E84:		COMPLIES (NFPA 90A & B)
	Flame Spread Index:	< 25
	Smoke Developed Index:	< 50
ASTM E162:		COMPLIES (NFPA 130)
ASTM E662:		COMPLIES (NFPA 130)
ASTM 1530 Part 3	Ignitability Index:	0
	Spread of Flame Index:	0
	Heat Evolved Index:	0
	Smoke Developed Index:	0 – 1
AS 3837	BCA Group Number:	1
	Smoke Index:	≤250
BS 476 Parts 6 & 7:		CLASS 0
BS 6853 Annex B	Smoke Toxicity	COMPLIES (R < 1.0)
IMO MSC 61(67) Part 2	Smoke Toxicity	COMPLIES
ISO 5659 Part 2	Smoke Density	COMPLIES (IMO MSC 61(67) Part 2)
	Smoke Toxicity	Dm < 200 Satisfies max allowable concentrations for the following combustion gases: CO, HCl, HBr, HF, HCN, NOx, SO2
UL 94	Horizontal Burn	UL APPROVED (HF-1)

TOLERANCES

The following tables list tolerances for thickness, density and width of standard Thermolink® products:

Thickness	
Nominal Thickness	**Tolerance**
5mm	-0.5mm / +1.0mm
6mm	-0.5mm / +1.5mm
8mm	-1.0mm / +1.5mm
10mm	-1.0mm / +1.5mm
12mm	-1.0mm / +1.5mm
15mm	-1.0mm / +2.0mm
20mm	-1.0mm / +2.0mm
25mm	-1.0mm / +2.5mm
30mm	-1.0mm / +2.5mm
35mm	-1.0mm / +2.5mm
40mm	-1.5mm / +3.0mm
45mm	-1.5mm / +3.0mm
50mm	-2.0mm / +3.5mm
Other thicknesses and/or tolerances subject to confirmation.	

Density* (foam only)	
Nominal Density	**Tolerance**
25 kg/m3	± 10%
*Applies to the foam core. The density of Thermolink with reinforced aluminium foil will be higher.	

Width (Sheet)	
Nominal Width	**Tolerance**
1000mm	-0 / +20mm
1200mm	
1500mm	
Other widths and/or tolerances subject to confirmation.	

COUNTRY OF MANUFACTURE

Thermolink® Sheet and Tube insulation is manufactured in Malaysia and Vietnam

ENQUIRIES

If you require any further information, please consult your local distributor or contact us at https://ctlink-group.com/.