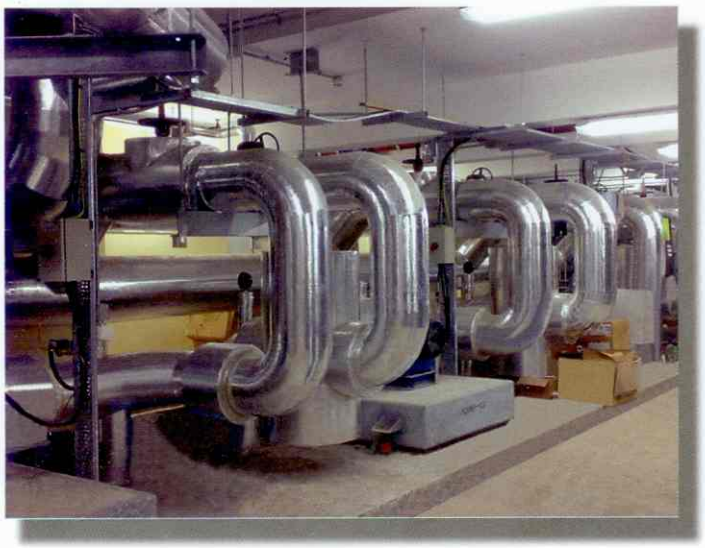
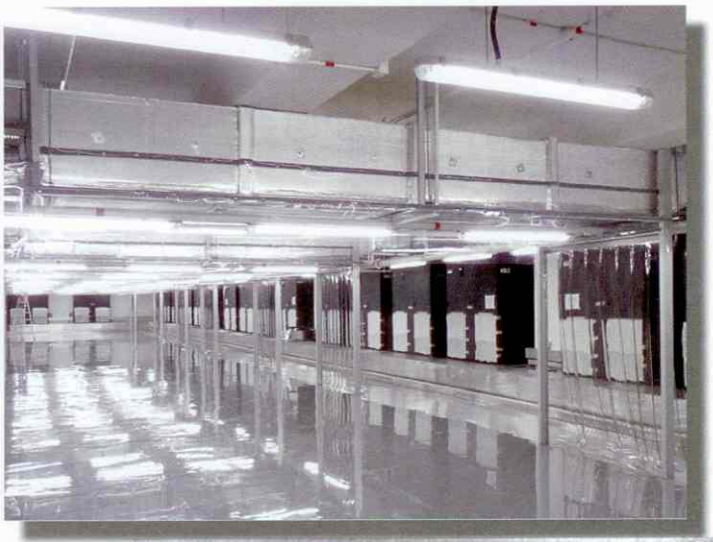
Evertherm® insulation

PHENOLIC FOAM PRODUCTS





Benefits & Advantages

- CFC's & HCFC's free.
- Provides optimum energy saving and environmental solution.
- Class 0 Fire Rating.
- Negligible smoke emission.
- Wide range of working temperature.
- Best available thermal insulation properties.
- Closed cell structure with excellent moisture resistance.
- Non-fibrous.
- Excellent chemical resistance.
- Will not sustain vermin or mould.

DESCRIPTION

Evertherm is a rigid phenolic foam insulation material with high level of closed cell structure. It has extremely low thermal conductivity and provides the best fire properties by comparing with other types of insulation materials. It is entirely CFC's and HCFC's free with zero Ozone Depletion Potential (ODP). It provides an optimum solution towards compliance with international environmental agreements.

TEMPERATURE RANGE

Evertherm phenolic foam insulation may be used on mild steel, stainless steel, copper and plastic pipework with operating temperatures range from -180°C to +120°C.

STANDARDS

Evertherm phenolic foam insulation satisfies the requirements of BS 5422, BS 5970, BS EN ISO 12241 and other major national specifications.

FIRE PERFORMANCE

Evertherm phenolic foam insulation is rated Class 0 as defined in the Building Regulations and achieve a smoke obscuration rating of Ds (max) ≤ 9, when tested in accordance with BS EN ISO 5659-2 (classified as negligible).

BIOLOGICAL

Evertherm Phenolic Foam Insulation is resistant to a wide range of oils, solvents and chemicals. It is immune to vermin and will not sustain growth of fungi, mould and bacteria.

WORKABILITY

Evertherm Phenolic Foam Insulation is easy and simple to install and can be cut and shaped to any size with normal hand tools.

MOISTURE RESISTANCE

Evertherm has a closed cell content of >90%, which makes it highly resistant to moisture penetration and wicking. It is the ideal insulation material for cold, chilled, hot water pipework and ductwork systems.

COST EFFECTIVE

Evertherm offers the most thermally efficient insulation performance than other insulation materials, providing an energy saving benefit and lower long term system running costs.

TECHNICAL DATA

Typical Properties	Test Method	Technical Data
Density (nominal)		40 kg/m^3
Thermal Conductivity (k-value) at 20°C Mean Temperature	BS 874 : Part 2	0.020 W/m°C
Temperature range		- 180°C to + 120°C
Compressive Strength	ISO 844	210 kN/m^2
Closed Cell Content	BS 4370 Method 10	>90%
Moisture Vapour Transmission at 38°C 88% RH	BS 4370: Part 2	10 µgm/Nh
Water Absorption	ISO 2896	5% w/v

Fire Properties	Test Method	Technical Data
Ignitability	BS 476 : Part 12	Class N
Fire propagation	BS 476 : Part 6	$I < 12$, $i_1 < 6$
Surface spread of flame	BS 476 : Part 7	Class 1
Fire Rating	UK Building Regulations Classification	Conform to Class 0
Smoke Obscuration	BS EN ISO 5659-2	Ds (max) ≤ 9 (negligible)

APPLICATIONS

Evertherm Phenolic foam Insulation is specially designed for using in the pipeworks and ductworks within the Heating, Ventilation, Refrigeration, Air-Conditioning ducting systems, suspended ceiling and partition, roof insulation as well as used in Hospitals, Hotels, Museum, Laboratory, Library, Commercial complex buildings, Residential buildings, Schools, Food courts and also can be applied to Cold storage, Data centre and Computer room (Raised Floor systems).

MAINTENANCE

No maintenance is required in normal operation conditions. If any damage found, it should be replaced as appropriate and immediately.

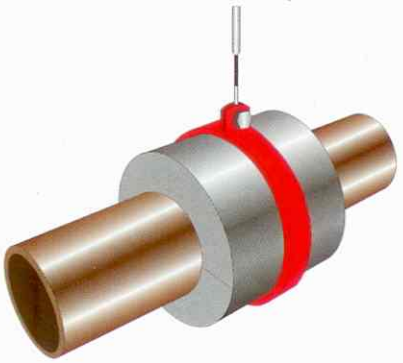
PRODUCTS AVAILABLE

Pipe Sections

- Preformed pipe sections faced with a factory applied class 0 aluminium foil jacket.
- Nominal density : 40 or 80 kg/m^3.
- Standard length : 1000 mm.
- Nominal pipe diameters : 15 – 1200 mm.
- Standard Thickness : 15 – 150 mm.

High Density Pipe Supports

- Preformed pipe supports faced with a factory applied class 0 aluminium foil jacket.
- Nominal density : 80 and 120 kg/m^3.
- Standard length : 100 - 300 mm
- Nominal pipe diameters : 15 – 1200 mm.
- Standard Thickness : 15 – 150 mm



Slabs

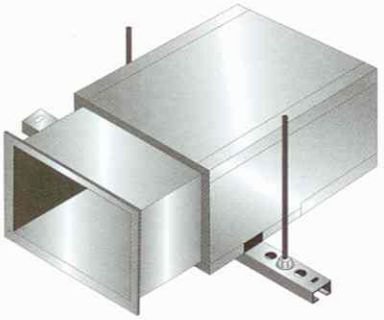
- Preformed slabs faced with a factory applied class 0 aluminium foil jacket on one side.
- Nominal density : 40 kg/m^3.
- Standard sizes : 1000 x 600 mm.
- Standard Thickness : 20 – 150 mm

Insulated Panels for Raised Floor System

- Preformed slabs with a factory applied class 0 aluminium foil jacket on one side and a reinforced mesh on the other side.
- Nominal density : 40 or 80 kg/m^3.
- Standard sizes : 600 x 600 mm or 1200 x 600 mm
- Standard Thickness : 25 mm

High Density Duct Supports

- Preformed Duct supports faced with a factory applied class 0 aluminium foil jacket on one side.
- Nominal density : 80 kg/m^3.
- Standard sizes : 1000 x 100 mm
- Standard Thickness : 15 – 100 mm



TYPICAL SPECIFICATION DETAILS

I. For Pipework

(1) Pipe Sections

Chilled water, hot water and condensate water pipework to be fully insulated with Evertherm phenolic foam insulation with a factory applied class 0 aluminum foil vapour barrier jacket. The preformed pipe sections, cut to the specified thickness and to suit the outside diameter of the pipe. During installation, the surface of pipes must be dry and clean as according to BS 5970 Code of Practice, insulation shall be carefully cut at site with sharp knife or electric tool with fine blade. All cut surfaces must be flat so that there will be no gap at joint. Any rough-cut surface must be smoothed out with sandpaper before installation. All cut surfaces of insulation must be dealt with adhesive which recommended by manufacturer. Factory applied class 0 fire retarded aluminium foil jacket, with a 50mm overlap along the longitudinal opening joint. The overlap, longitudinal joints and butt joints should be sealed with class 0 fire retarded adhesive. All radial butt joints between sections of insulation and longitudinal joints should be sealed with a band of minimum 63mm wide self-adhesive matching class 0 aluminium foil tape. At pipe hanger support

brackets, Evertherm high density pipe support inserts shall be used.

(2) Pipe Supports

Pipe supports should fit around the outside of the insulation. The insulation at support points shall be heavy density load-bearing factory preformed Evertherm phenolic foam sections with density and minimum length as recommended in Table 1 and made to the same thickness as the adjacent pipe insulation. The specified finish should be continuous through the support and joints are properly sealed. A metal spreader plate should be situated between the insulation and the support to avoid point loading on the insulation (Fig.1).

Fig.1 Installation of Pipe Support