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August 1998

# ISOWOOL

Acoustic and Thermal Mineral Wool Insulation



## Pipe sections

For HVAC & Industrial Pipe work

**British Gypsum-Isover**

# ISOWOOL

## British Gypsum-Isover

British Gypsum-Isover is a joint venture between the insulation division of British Gypsum and Isover Saint-Gobain, the World and European leader in mineral wool insulation.



**Isowool Pipe Insulation** is designed to provide thermal and acoustic insulation of pipe work in H&V, air conditioning and industrial applications. It consists of strong yet light-weight pre-formed 'snap-on' sections manufactured from non-combustible mineral wool. Two types are available:

**Isowool Plain Pipe Insulation** is suitable for use with or without site-applied finishes, on pipes operating at ambient temperatures and above, up to a maximum of 500°C.

**Isowool Foil Pipe Insulation** with a factory applied reinforced aluminium foil 'Class O' facing, incorporating a self adhesive overlap, is suitable for use on pipes operating at below ambient temperatures.

Both types are treated during manufacture with special additives which make them water repellent.

## Unique environmental benefits



**Isowool Pipe Insulation** is a glass mineral wool product, manufactured from silica sand, the Earth's most abundant naturally occurring mineral. "Cradle to Grave" energy analysis proves that glass mineral wool is one of the most environmentally friendly insulation materials. An important environmental design consideration, unique to the production of **Isowool Pipe Insulation**, is the use of recycled material. Using a patented

technique, over 70% of the raw material used in the production process is recycled. This process does not include the use of CFCs, HCFCs, or other environmentally damaging gasses.

## Fire performance

The base mineral wool of Isowool pipe sections is rated 'non-combustible' when tested to BS476: Part 4: 1984, 'Non-combustibility test for materials'. Additionally, the factory applied aluminium foil-facing meets the highest standards required by BS476: Part 6, 'Fire Propagation' and BS476: Part 7, 'Surface Spread of Flame'. Both **Isowool Plain Pipe Insulation** and **Isowool Foil Pipe Insulation** are, therefore, rated 'Class O' to the Building Regulations.

## Service temperature



**Isowool Plain Pipe Insulation** can be used on pipework operating with continuous service temperatures of 250°C and over. For service temperatures in the range 250°C to 500°C our Technical

Department should be contacted for design advice.

**Isowool Foil Pipe Insulation** can be used on pipework services operating with a maximum temperature of 250°C. The temperature of the facing should not exceed 80°C.

Isowool pipe sections can be used to prevent condensation and protect pipework from freezing. Care must be taken to ensure a 100% vapour barrier, including the sealing of all butt-joints with foil tape. **Isowool Pipe Insulation** is dimensionally stable over this temperature range.

## Thermal conductivity

Mean Temperature °C	Thermal Conductivity W/m.k
10	0.032
50	0.035
100	0.043
200	0.062

## Density

The nominal density of Isowool pipe sections is 80kg/m<sup>3</sup>.

## Standards



**Isowool Pipe Insulation** is manufactured to a quality assurance system which ensures the highest possible standards, and also in compliance with the requirements of: *BS3958: Part 4: 1982*, 'Bonded

pre-formed mineral wool pipe sections'.

The product can be used in conjunction with the performance requirements and application standards of *BS5422: 1990*, 'Method for specifying thermal insulating materials on pipes, ductwork and equipment (in the temperature range -40°C to +700°C)' and *BS5970: 1992*, 'Code of practice for the thermal insulation of pipework and equipment (in the temperature range -100°C to +870°C)'.

## Water vapour permeance

The water vapour permeance of the aluminium, factory-applied, foil covering on **Isowool Foil Faced Pipe Insulation** is 0.00024g/(s.MN) and can, therefore, be used on pipework services operating at below-ambient temperatures, as part of a fully sealed system.

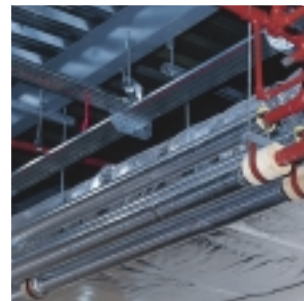
## Sound Reduction

Noise levels emanating from pipework services can be significantly reduced with the use of Isowool pipe sections which will help to achieve acceptable environmental noise levels. The degree of sound reduction will depend upon the thickness of insulation used, and the nature of any finish used to over-clad the pipe insulation.

## Durability

**Isowool Pipe Insulation** is a rot-proof, odourless product, which is water resistant and non-hygroscopic, and with no capillary tendencies. It does not sustain vermin or encourage the growth of micro-biological organisms such as mould, fungi or bacteria.

## Compatibility with other materials



**Isowool Pipe Insulation** is a chemically inert product, compatible with all materials likely to be used in heating and ventilating, air conditioning, industrial and related pipework services. The pipe sections contain inherently low

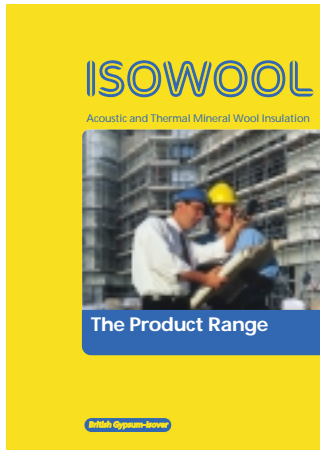
levels of chlorides and high levels of stress corrosion inhibitors, such as silicate ions and sodium ions. Where **Isowool Pipe Insulation** is used, therefore, the effect of these inherent inhibitors, combined with the water repellent additives, helps to prevent chlorides from attacking the surface of austenitic stainless steel pipes.

## Dimensions and packaging

**Isowool Pipe Insulation** is manufactured in 1.2m lengths and in a range of thicknesses to enable compliance with the recommendations of BS5422 and beyond. The pre-formed pipe sections are produced to fit all British Standard steel and copper pipe sizes. They are supplied in cardboard cartons or strong plastic bags, depending upon sizes.

The range of dimensions varies between 15mm inner diameter and 20mm wall thickness to 324mm inner diameter and 100mm wall thickness.

## Other literature available



### The Product Range

Isowool is also the brand name for a wide range of acoustic and thermal building insulation products. The products are made in the most modern UK mineral wool plant and are the only ones fully endorsed by British Gypsum. Ref: B005



### Duct Wraps & Slabs

Isowool is also a range of duct wraps and duct slabs for HVAC ductwork and equipment. The brochure is designed as a quick reference guide for mechanical engineers, contractors and distributors alike. Ref: I002

## About Isover

Isover, the insulation division of Saint-Gobain, is the leading world and European insulation company. The Saint-Gobain group, one of the world's top 100 global corporations, is the largest building material producer in Europe, with a turnover

in excess of £10bn. It has 9 operating divisions, ranging from flat glass to industrial ceramics. Operating companies in the UK include Carborundum, Stanton and Solaglass.

## About British Gypsum

British Gypsum is the UK market leader in gypsum plaster, plasterboard and associated systems with a unique history for product innovation, technical excellence and unrivalled customer service. The

company is a member of BPB Industries, one of the world's largest gypsum groups, operating in over 35 countries. Its brand names are Gyproc, Carlite, Thistle and Glasroc.

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leading  
Acoustic  
& Thermal  
Insulation

### British Gypsum-Isover

British Gypsum-Isover  
Sales & Marketing  
East Leake  
Loughborough  
Leicestershire LE12 6JQ  
Tel: 0115 945 1000  
Fax: 0115 945 1915

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