

HEATLOCK™

Moulded Pipe Insulation

PRODUCT DESCRIPTION AND TYPICAL APPLICATIONS

Insulation Solutions™ *Heatlock* Pipe Insulation is manufactured from dense rigid Glass Wool pre-moulded into one-piece cylindrical sections. These sections are slit along one wall to allow the insulation to be opened and installed over piping. *Heatlock* has a unique Z shaped slit along its opening length on larger sections to give maximum protection against heat loss. A variety of factory applied facings are available where extra protection of the outer surface or condensation control is required, including calico, aluminium foil and

Sisalation™ 450 laminate. *Insulation Solutions Heatlock* is available in a variety of wall thicknesses to suit standard iron pipes and copper tube from 12.7mm to 610mm O.D. Insulation thicknesses are 25, 38, 50, 63, 75, 88 and 100mm. Length per moulded section 1000mm.

Note: Not all thicknesses are available ex stock. For packaging information and current prices see the current *Insulation Solutions* Price List or contact your nearest *Insulation Solutions* Sales Office.

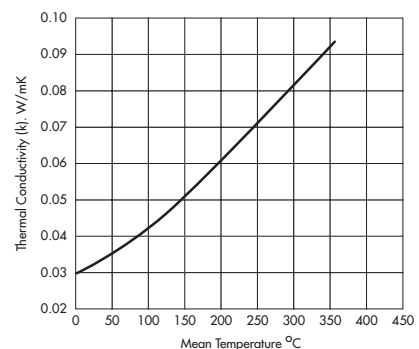
THERMAL CONDUCTIVITY

The thermal conductivity of *Heatlock* at a mean temperature of 25°C is 0.033 W/mK (at 20°C it is 0.032 W/mK). Values of thermal conductivity may be obtained from the graph:

$$*Mean\ Temperature = \frac{T1 + T2}{2}$$

Where T1 = temperature of hot side of insulation (°C)

Where T2 = temperature of cool side of insulation (°C)



EARLY FIRE HAZARD RATING

When tested in accordance with AS1530 Part 3 "Early Fire Hazard Properties of Materials", unfaced *Heatlock* Pipe Insulation exhibits the following characteristics:

Ignitability Index	0
Spread of Flame Index	0
Heat Evolved Index	0
Smoke Developed Index	0-1

MOISTURE ABSORPTION

Tested in an atmosphere of 65% relative humidity at 20°C in accordance with British Standard 2972.

The moisture content of *Insulation Solutions* products is less than 0.1% by volume.

ALKALINITY

When tested in accordance with British Standard 3958, *Insulation Solutions* products are slightly alkaline pH9 (neutral is pH7), and thus

will not corrode steel. Protection against contamination from external sources is also recommended to avoid the possibility of corrosion.

MAXIMUM SERVICE TEMPERATURE

The maximum service temperature for *Heatlock* is 480°C. Where facings are applied, the temperature tolerances of the facing adhesive

limits the surface temperature to 70°C. (The appropriate insulation thickness can be used to limit surface temperature to 70°C).

HEATLOCK FACING MATERIALS

Heatlock is available with a variety of outer jacket or facing materials which enable its use on both cold and hot pipe applications.

Cold Applications: To prevent the ingress of water vapour and subsequent potential condensation or freezing problems, all pipe insulation requires an effective vapour barrier. *Heatlock* is available with either Alfoil™ or *Sisalation* pre-applied to the sections for this purpose.

Hot Applications: *Heatlock* does not require a facing for hot work.

However a metal cladding (generally swaged galvanised or aluminium metal sheathing) is recommended on all outdoor applications, or on indoor applications where protection from physical damage is required. *Heatlock* is also available with an adhered lightweight calico facing, ready for the application of suitable protective mastic or paint finishes. For more detailed information on installing or finishing *Heatlock* contact your nearest *Insulation Solutions* Sales Office.

INSULATION HEAT TRANSFER CALCULATION SERVICE

Given the data of actual service temperature and the required surface temperature, the appropriate insulation thickness can be calculated by your local *Insulation Solutions* State Sales Office. *Insulation*

Solutions can also calculate the optimum insulation thickness quickly and accurately, and present it in an easy-to-read format.

SUITABILITY FOR STAINLESS STEEL

Under certain conditions, the presence of soluble chlorides may cause stress corrosion cracking of some stainless steels. *Insulation Solutions Heatlock* does not contain significant amounts of chlorides,

and conforms to ASTM C795 "Specification for Wicking-type Thermal Insulation for use over Austenitic Stainless Steel", and is thus considered suitable. Tests conducted by Lehigh Laboratories Inc. USA.

STORAGE

Protect the insulation from water damage, physical abuse, and direct flame sources. Store under cover prior to installation.

SPECIFICATION NOTES

State:

- Name and product type *Insulation Solutions Heatlock* Pipe Insulation.
- Pipe material, outside diameter and length of run.
- Insulation thickness required.
- Type of finish, facing or surface protection required.

BIO-SOLUBILITY

The fibre used in this product is FBS-1 Bio-Soluble Glass Wool™ Insulation. This means that it dissolves in bodily fluids and is quickly cleared from the lungs. It complies with the test of short term

biopersistence in Note Q of [NOHSC: 10005 (1999)]. *Glass Wool* is classified as safe to use.



SUSTAINABILITY

Sustainability...measures that satisfy the needs of people today while enhancing the quality of life for future generations. The demands on non-renewable resources for the production of energy are not sustainable without compromising the environment. Insulation, correctly specified and installed, is one of the most critical products in

improving energy efficiency and reducing the levels of greenhouse gas emissions. *Insulation Solutions* is committed to providing environmentally sustainable products and utilises up to 70% recycled waste glass in the production of *Glass Wool* Insulation.

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