

HIGH DENSITY EQUIPMENT INSULATION (HDEI)TM

PRODUCT DESCRIPTION AND TYPICAL APPLICATIONS

Insulation SolutionsTM HDEI is a dense rigid Glass Wool board designed for thermal and acoustic insulation of flat surfaces where high compressive strength and an excellent sound transmission

barrier is required, for example, Fan Casings, Machinery Enclosures and Plant Rooms.

PHYSICAL CHARACTERISTICS

Nominal Thickness (mm)	25	38	50
Standard Dimensions* (mm)	3000 x 1200	3000 x 1200	3000 x 1200
Nominal Density (kg/m ³)	96	96	96
Mass/Unit Area (kg/m ²)	2.4	3.6	4.8

*Not all sizes may be held in stock. Please check your local Insulation Solutions Sales Office for details.

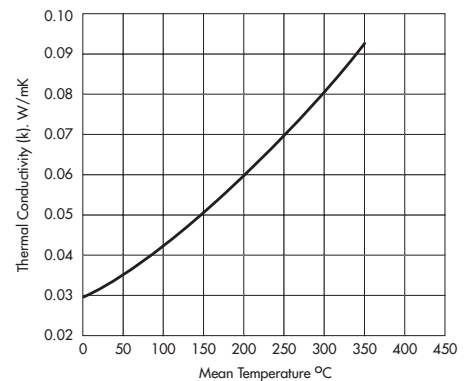
THERMAL CONDUCTIVITY

The thermal conductivity of HDEI at a mean temperature* of 25°C is 0.033 W/mK (at 20°C it is 0.032 W/mK) when tested in accordance with ASTM C177. Values of thermal conductivity may be obtained from the graph opposite:

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

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', *Insulation Solutions HDEI* exhibits the following characteristics. Tests were conducted by AWTA.

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

HDEI will not support the corrosion of steel. Protection against contamination from external sources is recommended, for example, by applying suitable weatherproof cladding over the insulation.

Tested in accordance with British Standard 3958, *Insulation Solutions Glass Wool* products are slightly alkaline, pH9 (neutral is pH7).

DATA SHEET

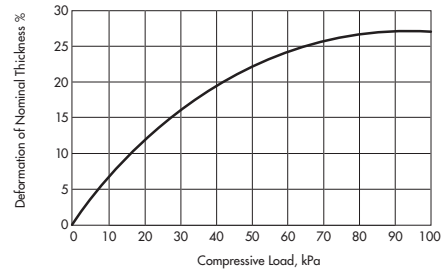
HIGH DENSITY EQUIPMENT INSULATION (HDEI)TM

MAXIMUM SERVICE TEMPERATURE

The recommended maximum service temperature for *HDEI* is 340°C.

COMPRESSIVE STRENGTH

High Density Equipment Insulation has excellent compressive strength and recovers to its normal thickness even after prolonged compression.



SOUND ABSORPTION

HDEI has the following sound absorption coefficients when tested in accordance with AS1045 by the Reverberation Room Method. Tests were carried out with no air space behind the samples. Results are

based on Test Reports from the CSIRO or other NATA registered laboratories.

Nominal thickness (mm)	Sound absorption coefficients (reverberation) at frequencies (Hz) of:					
	125	250	500	1000	2000	NRC
25	0.16	0.27	0.67	0.88	1.02	0.70
50	0.19	0.86	1.08	1.17	1.08	1.05

SPECIFICATION NOTES

State:

- Product name - *Insulation Solutions High Density Equipment Insulation*.
- Thickness (and surface temperature, if applicable).

- Type of equipment or installation and operating temperature range.
- Fixing method preferred and if vapour barrier required.
- Location of insulation, indoors or outdoors, and finish required.

HEAT TRANSFER CALCULATION SERVICE

Given the 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, in an easy-to-read format.

BIO-SOLUBILITY

The fibre used in this product is FBS-1 Bio-Soluble Glass WoolTM 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.

