

FI48 RIGID GLASS WOOL™

Mediumweight Equipment Insulation

PRODUCT DESCRIPTION AND TYPICAL APPLICATIONS

Rigid Glass Wool™ provides an excellent balance of both thermal and acoustic insulation properties, which render it suitable for a broad range of industrial applications. It is particularly suited to the mechanical services Industry where design

requirements dictate optimum performance from internally lined air conditioning ducts, plant room and equipment casings. In such applications *Rigid Glass Wool* offers the additional benefits of high compressive strength and clean, accurate fabrication.

PHYSICAL CHARACTERISTICS

| | | | | |
|--------------------------|-------------|-------------|-------------|-------------|
| Material R-value (m²K/W) | 0.8 | 1.2 | 1.5 | 2.3 |
| Thickness (mm) | 25 | 38 | 50 | 75 |
| Dimensions (mm)* | 2400 x 1200 | 2400 x 1200 | 2400 x 1200 | 2400 x 1200 |
| Density (kg/m³) | 48 | 48 | 48 | 48 |
| Mass/Unit Area (kg/m²) | 1.2 | 1.6 | 2.4 | 3.6 |

*Other sizes are available, subject to minimum order quantities.

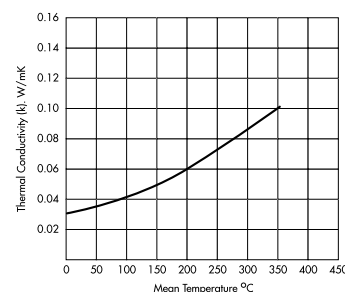
THERMAL CONDUCTIVITY

The R-value of *Rigid Glass Wool* is determined in accordance with AS/NZS 4859.1. The thermal conductivity of *Rigid Glass Wool* at a mean temperature* of 25°C is 0.032 W/mK (at 20°C it is 0.031 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", *Rigid Glass Wool* exhibits the following characteristics. Tests were conducted by AWTA.

| | Plain | Black Tissue Faced | Sisalation® 450 Faced |
|-----------------------|-------|--------------------|-----------------------|
| Ignitability Index | 0 | 0 | 0 |
| Spread of Flame Index | 0 | 0 | 0 |
| Heat Evolved Index | 0 | 0 | 0 |
| Smoke Developed Index | 0-1 | 2 | 3 |

MOISTURE ABSORPTION

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

Rigid Glass Wool is less than 0.1% by volume.

ALKALINITY

When tested in accordance with British Standard 3958, Fletcher Insulation™ glasswool products are slightly alkaline.

pH9 (neutral is pH7).

MAXIMUM SERVICE TEMPERATURE

The maximum service temperature for *Rigid Glass Wool* is 340°C. Where facings are applied, the temperature tolerance 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).

BUILDING CODE OF AUSTRALIA (BCA)



The Energy Efficiency provisions of the BCA requires that all insulation complies with the requirements of the Australian/New Zealand standard AS/NZS 4859.1 - Materials for the thermal insulation of buildings. AS/NZS 4859.1 specifies testing and labelling requirements for all types of insulation incorporated into the

building envelope and its services. The thermal resistance (R-value) shown on all labelling must be determined by a recognised laboratory, accredited to test to the relevant standards and procedures. All applicable *Fletcher Insulation* products are independently certified by an accredited organisation to comply with AS/NZS 4859.1.

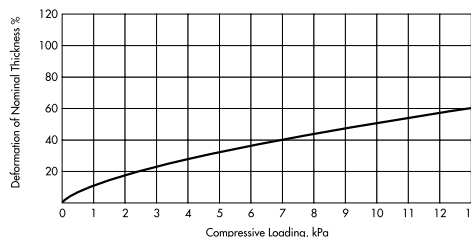
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COMPRESSIVE STRENGTH

Rigid Glass Wool has excellent compressive strength and recovers to its nominal thickness even after prolonged compression. Deformation under compressive loading is shown on the graph.



ACOUSTIC PERFORMANCE

Rigid Glass Wool 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, and results are based on test reports from the CSIRO or other NATA registered laboratories.

| Thickness (mm) | Sound absorption coefficients (reverberation) at frequencies (Hz) of: | | | | | NRC |
|--|---|------|------|------|------|------|
| | 125 | 250 | 500 | 1000 | 2000 | |
| Rigid Glass Wool - Plain | | | | | | |
| 25 | 0.07 | 0.26 | 0.67 | 0.95 | 1.02 | 0.7 |
| 50 | 0.33 | 0.74 | 1.18 | 1.11 | 1.12 | 1.05 |
| Rigid Glass Wool - Black Tissue Faced | | | | | | |
| 25 | 0.08 | 0.33 | 0.73 | 0.94 | 1.04 | 0.75 |
| 50 | 0.26 | 0.79 | 1.16 | 1.09 | 1.08 | 1.05 |
| Rigid Glass Wool - Perf. Foil Faced (eg. Sisalation® 450) | | | | | | |
| 25 | 0.11 | 0.29 | 0.77 | 1.04 | 1.03 | 0.8 |
| 50 | 0.25 | 0.89 | 1.15 | 1.12 | 1.09 | 1.05 |

HEAT TRANSFER CALCULATION SERVICE

Given the actual service temperature and the required surface temperature, the appropriate insulation thickness can be calculated by staff at Fletcher Insulation. Fletcher Insulation

can also assist to determine the optimum insulation thickness quickly and accurately, in an easy-to-read format.

BIO-SOLUBILITY

Fletcher Insulation glasswool products are manufactured from FBS-1 Bio-Soluble Glass Wool™. FBS-1 Bio-Soluble Glass Wool™ is classified as non-hazardous according to the criteria of the Australian Safety and Compensation Council (formerly

NOHSC), Approved Criteria for Classifying Hazardous Substances (NOHSC:1008) 3rd Edition. Fletcher Insulation glasswool is classified as safe to use, refer to our MSDS.



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. Fletcher

Insulation is committed to providing environmentally sustainable products and utilises up to 70% recycled waste glass in the production of glasswool insulation. Fletcher Insulation products comply with the GreenStar Insulant ODP Emissions credit requirement, avoiding the use of ozone depleting substances in both manufacture and composition.

FREE CALL: 1800 626 624

WEBSITE: www.eurekaInsulation.com.au

Note: Fletcher Insulation (Vic) Pty. Ltd. reserves the right to change product specifications without prior notification. Information in this publication and otherwise supplied to users as to the subject product is based on our general experience and is given in good faith, but because of the many particular factors which are outside our knowledge and control and affect the use of products, no warranty is given or is to be implied with respect to either such information or the product itself, in particular the suitability of the product for any particular purpose. The purchaser should independently determine the suitability of the product for the intended application.

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TECHNICAL DATA SHEET