

Ductboard™

All in one duct system

Product description and typical applications

DuctBoard™ is a composite product manufactured from rigid, high density glasswool with Sisalation® 450 adhered to one side. DuctBoard is used to fabricate a complete air duct system with integral thermal, acoustic and condensation control properties. DuctBoard is designed for use in commercial, industrial and residential heating, air conditioning and ventilating systems operating at velocities up to 12m/s, 0.5kPa static pressure and maximum air temperature in duct of 120°C. DuctBoard is easily installed in one operation, even flush against walls and ceilings where there is no necessity to leave space for lagging after the duct is installed. It is strongly recommended that DuctBoard is fabricated and installed in accordance with the manufacturer's instructions.

| | | |
|--------------------------------------|-------------|-------------|
| Nominal Thickness (mm) | 25 | 33 |
| Nominal R-value (m ² K/W) | 0.8 | 1.0 |
| Dimensions (mm)* | 3000 x 1200 | 3000 x 1200 |
| Nominal Density (kg/m ³) | 96 | 96 |
| Mass/Unit Area (kg/m ²) | 2.4 | 3.2 |

*Not all sizes may be held in stock. Please contact your local *Fletcher Insulation* Branch details.

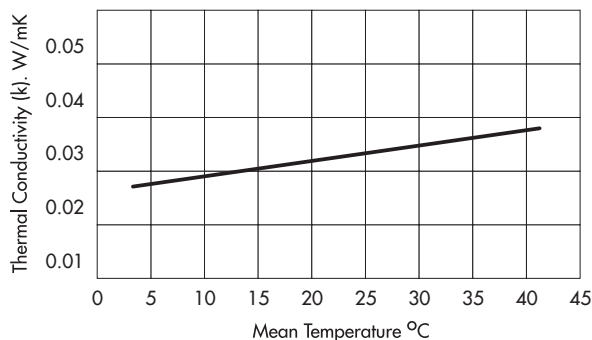
Thermal conductivity

The Material R-value of DuctBoard is determined in accordance with AS/NZS 4859.1. The thermal conductivity (k) of DuctBoard at 20°C mean temperature* is 0.032 W/mk. Values of thermal conductivity may be obtained from the graph which is derived from tests performed by the CSIRO, Division of Applied Physics, in accordance with ASTM C177.

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

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

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



Condensation barrier

The DuctBoard vapour barrier is Sisalation® 450 reinforced aluminium foil laminate. This vapour barrier has a permeance of less than 1.14 ng/N. At joints and seams in DuctBoard, Vapastop® Tape or a suitable equivalent should be used to seal the vapour barrier.

Green Star compliant

Fletcher Insulation is committed to providing environmentally sustainable products. *Fletcher Insulation* products have Zero Ozone Depleting Potential in both manufacture and composition, complying with the GreenStar Insulant ODP Emissions credit requirement. VOC emissions are low.



AS1530.3 Early fire hazard properties of materials

DuctBoard exhibits the following characteristics when tested in accordance with AS1530 Part 3

| | |
|-----------------------|---|
| Ignitability Index | 0 |
| Spread of Flame Index | 0 |
| Heat Evolved Index | 0 |
| Smoke Developed Index | 3 |

Sound attenuation

The table shows insertion losses (IL) measured in 4 metre lengths of duct (600 x 600mm cross-section) constructed of 25mm and 33mm thick DuctBoard. Testing was performed by Vipac Engineers and Scientists. The IL of any length can be obtained by simply multiplying by the required length.

Insertion loss (dB) at frequencies of: (Hz)

| | Frequency (Hz): | | | | | | |
|-------------|-----------------|-----|-----|------|------|------|------|
| | 125 | 250 | 500 | 1000 | 2000 | 4000 | 8000 |
| 33mm | 17 | 25 | 50 | 72 | 49 | 37 | 34 |
| 25mm | 6 | 14 | 21 | 48 | 21 | 19 | 20 |

Sound breakout

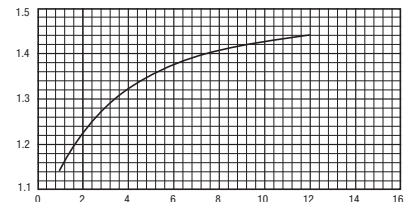
The table shows the Breakout Transmission Loss (TL) characteristics of duct (600 x 600mm cross-section) constructed of 25mm and 33mm thick DuctBoard. Testing was performed by Vipac Engineers and Scientists.

Breakout transmission loss (dB) at frequencies of: (Hz)

| | Frequency (Hz): | | | | | | |
|-------------|-----------------|-----|-----|------|------|------|------|
| | 125 | 250 | 500 | 1000 | 2000 | 4000 | 8000 |
| 33mm | 29 | 33 | 28 | 28 | 43 | 47 | 48 |
| 25mm | 22 | 15 | 23 | 18 | 22 | 28 | 35 |

Surface friction correction factor

The graph shows the friction correction factors for DuctBoard at various air velocities. Values obtained from the ASHRAE chart 'Friction of air in straight ducts of galvanised sheet metal' are multiplied by the appropriate correction factor to obtain the correct surface friction value.



Design limitations

- Velocity: maximum recommended air velocity is 12 metres/sec. (Tested to 25 metres/sec).
- Static Pressure: maximum recommended static pressure is 0.50 kPa.
- Temperature: maximum recommended temperature in duct is 120°C. DuctBoard is not suitable for use within poured concrete slabs or in exposed positions unprotected from the weather.

Specification notes

State the following:

Product name - Fletcher Insulation Ductboard

Thickness required

Fabricated and installed in accordance with the manufacturer's instructions.



The production of environmentally sustainable FBS-1 Glasswool Bio-Soluble Insulation utilizes approximately 70% recycled waste glass.



Fletcher Insulation glasswool products are manufactured from FBS-1 Bio-Soluble Glass Wool™. FBS-1 Bio-Soluble Glass Wool™ is not classified as 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.

