

# FIREPRO CENTABUILD INSULATION

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THERMASOUND ii DATASHEET - AUG08

Product specifications  
can change. Contact  
us to ensure you have  
our latest datasheet

## THERMASOUND II

### THERMAL AND ACOUSTIC LINING BOARD

#### SUPERIOR TOUGH BLACK CLEANABLE CLOTH FACING (BFC)

#### LOW EARLY FIRE HAZARD INDICES

### DESCRIPTION

Thermasound II is a thermal and acoustical insulation board manufactured of highly resilient, inorganic glass fibres bonded with thermosetting resin. The board has a black Fibre Glass Cloth Face (BFC) on one side. It is designed for thermal and sound control of ducting industrial equipment and lining in shopping malls and factories. Thermasound II (BFC) provides a superior cleanable low fire hazard cloth surface and does not contain polypropylene.

Thermasound Glasswool BFC Insulation is used in a variety of thermal applications in plant rooms, on tanks, heated vessels etc, to conserve energy, reduce operating temperatures and provide personnel protection.

It is also widely used as thermal and acoustic liner for Heating, Ventilating, Air-Conditioning systems, to conserve heating and cooling energy and to control noise.

- Thermal Insulation
- Sound Dampening
- Cleanable Cloth Finish
- Dense Black - No yellow spots
- Tough BFC surface - NOT polypropylene
- Low Fire Hazard Indices

### CEILING and WALL LINING

Thermasound is recommended as a superior sound dampening and insulating wall and ceiling covering in shops and factories especially where high noise levels are experienced in buildings with open grid or egg crate type ceilings. The black cloth facing (BFC) makes Thermasound inconspicuous. It economically hides pipes, wiring, etc. in the ceiling area. It is easily cleaned.

### DUCTING/HEVAC

#### **Energy Conservation**

Thermasound duct liners reduce HEVAC systems operating costs by controlling heat loss or gain through sheet metal duct surfaces. By maintaining a consistent air temperature throughout the HEVAC systems, Thermasound duct systems allow airflow without over taxing the energy source.

#### **Acoustical Control**

Thermasound duct liners attenuate the noise generated by HEVAC equipment and air flow. The built in thermal/acoustical insulation absorbs noise generated by central air handling equipment and air movement through the ducts. The insulation also reduces noise transfer, such as cross-talk, from one room to another through the ducts.

Thermasound helps enhance the comfort level of building occupants by providing quiet, efficient air delivery and improved indoor air quality with adequate ventilation.

#### **Condensation Control and Microbiological Growth**

Thermasound duct liner thermal performance, in combination with the sheet metal surfaces acting as an air barrier and vapour retarder, helps to prevent formation of water vapour condensation inside the duct as well as on its outside surface. Reduces the opportunity for water damage and prevents the growth of fungus or bacteria.

#### **Air Velocity**

Thermasound Board Insulation with Black Fibre Glass Cloth Face (BFC) offers outstanding durability in exposure to air velocity or mechanical abuse and superior acoustical and thermal performance in systems operating at higher velocity.

### IMPORTANT

Thermasound II Black Cloth Faced Board has been tested by Applied Physics Laboratories Ltd, Auckland, NZ to AS1530:3-1999. This testing was carried out on the board with the Black Cloth Facing in place, not on the board alone. See test certificate No. 05123 dated 3/04/05 attached.

*NOTE: The technical information and suggestions for use and application presented herein represent the best information available to us and are believed to be reliable. They should not however be construed as controlling suggestions and there is no warranty of performance of our materials either expressed or implied. We urge that users of our materials conduct confirmatory tests to determine final suitability for their specific end uses. All dimensions are nominal. We reserve the right to make changes or to withdraw designs and products without notice.*

# THERMASOUND II - continued

General Properties	
Temperature (maximum)	120°C
Thermal Conductivity	W/mK 0.032
Density	48Kg/M <sup>3</sup>
Moisture absorption	Less than 3% @ 40°C 90% RH
Board Sizes	2.4M x 1.2M x 25mm 2.4M x 1.2M x 50mm
Corrosivity (with steel, copper or aluminium)	Does not accelerate
Odour	None
Capillarity (after 24 Hours)	Negligible
Shrinkage	None
Resistance to fungi and fungus growth	Does not promote

## FIRE PROPERTIES

Thermasound II Black Cloth Faced Board has been tested by Applied Physics Laboratories Ltd, Auckland, NZ to AS1530:3-1999 giving the following results:

Spread of Flame 0.  
Smoke Developed 3.

**See attached Fire Certificate**

## ACOUSTICAL PERFORMANCE

ASTM C423-90a is considered to be the current industry standard. Specification values are shown in the table below. Manufacturers estimated values for Thermasound Board are shown below them. The designer should use this data with the realisation that they were collected using a limited sample size and are not absolute values. Therefore, reasonable tolerances must be applied when using this data.

Specification Values Per ASTM C 423, Mounting A							
Sound Absorption Coefficients							
Octave Band Centre frequencies (Hz)							
Thickness	125	250	500	1000	2000	4000	NRC
25mm	0.02	0.2	0.52	0.73	0.82	0.84	0.55
50mm	0.12	0.67	0.99	0.97	0.91	0.87	0.9

Tested Values - Thermasound							
Sound Absorption Coefficients							
Octave Band Centre frequencies (Hz)							
Product	125	250	500	1000	2000	4000	NRC
25mm	0.07	0.34	0.66	0.9	0.86	0.74	0.69
50mm	0.12	0.65	0.91	0.98	0.84	0.59	0.85

## APPLICATION ON FLAT SURFACES

Thermasound II Boards are usually installed on flat surface by impaling over pins.

Fasteners shall be located not less than 75mm from each edge and corner of the insulation. Pin spacing should be no longer than 300mm.

Additional fasteners may be required to hold the insulation tightly against some surfaces.

All insulation joints should be sealed with pressure-sensitive joint sealing tape to match the insulation facing. Rub hard with a plastic sealing tool to effect a tight bond. Recommended practice suggests 75mm wide tape on flat surfaces or where edges are shiplapped and stapled. Use 100mm wide tape in lieu of shiplapping. If insulation is being applied to sheet metal duct work, all sheet metal joints must be sealed prior to insulating. Glass fabric and mastic may be used in lieu of pressure-sensitive tape.

## APPLICATION AS A DUCT INNER LINER

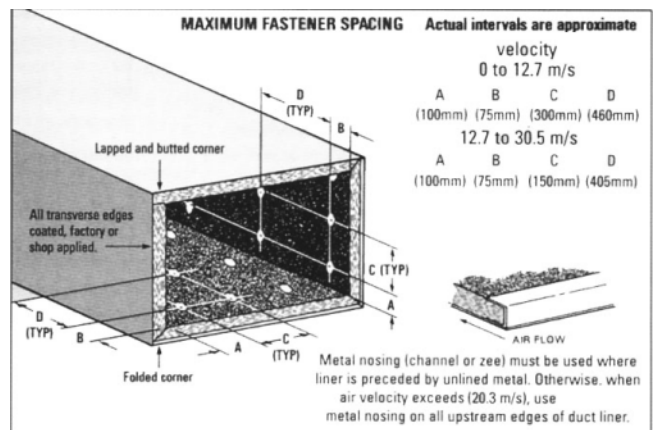
All portions of the Thermasound board shall be completely covered. Transverse joints shall be neatly butted and there shall be no interruptions or gaps. The black glass cloth surface of the duct liner board shall face the air stream.

Thermasound board shall be adhered to the sheet metal with 90% (minimum) coverage of adhesive, and all exposed leading edges and all transverse joints coated with the adhesive.

Thermasound board shall be additionally secured with mechanical fasteners which compress the duct liner sufficiently to hold it in place.

Thermasound board shall be cut to assure tight, overlapped corner joints. The top pieces shall be supported at the edges by the side pieces.

After installation blow out duct system prior to occupancy to remove any scaps or foreign material remaining in the duct.

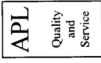


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# APL Applied Physics Laboratory

ACCREDITED LABORATORY NUMBER 206

International Accreditation New Zealand  
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All tests reported herein have been performed in accordance with the Laboratory's scope of accreditation

Reference Number 05123  
Page 2 of 2.

## TEST REPORT

Reference Number 05123  
Page 1 of 2.

### EARLY FIRE HAZARD PROPERTIES OF FIREPRO THERMASOUND // RIGID INSULATION

#### MATERIAL

FIREPRO THERMASOUND // RIGID INSULATION being a resin bound rigid fibreglass board with a black woven fibreglass cloth face, and having a nominal density of 48 kilograms per cubic metre, is marketed by Firepro Centabuild Ltd, 8 Botha Road, P O Box 12636, Penrose, Auckland, NEW ZEALAND.

The material was supplied by the client Firepro Centabuild Ltd as sufficient material for testing. The thickness tested was 25 millimetres.

The black woven fibreglass cloth was exposed during the tests.

#### TEST METHOD

Australian Standard 1530, Methods for fire tests on building materials, components and structures. AS 1530 Part 3, 1999, "Simultaneous determination of ignitability, flame propagation, heat release and smoke release."

The material was assigned the Laboratory Number 9057 and the tests were conducted on 1 November 2005.

The specimens were fixed to the support frames using a perimeter clamping ring.

#### RESULTS

The following results were obtained on six specimens tested.

Mean ignition time (seconds):	0
Mean flame propagation time (seconds):	0
Mean heat release integral (kJ/m <sup>2</sup> ):	0
Mean smoke release (Density/m):	0.05319
Mean smoke release (log <sub>10</sub> D):	-1.27412
Standard error (log <sub>10</sub> D):	0.02272

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#### Accredited Laboratory Number 206

All tests reported herein have been performed in accordance with the Laboratory's scope of accreditation International Accreditation New Zealand (IANZ) has a mutual recognition agreement with the National Association of Testing Authorities, Australia (NATA) such that both organisations recognise accreditations by IANZ and NATA as equivalent. Users of test certificates are recommended to accept test certificates endorsed in the name of either accrediting body.



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### EARLY FIRE HAZARD PROPERTIES OF FIREPRO THERMASOUND // RIGID INSULATION

From the results the following indices were determined:

IGNITABILITY INDEX (Range 0 - 20)	0
SPREAD OF FLAME INDEX (Range 0 - 10)	0
HEAT EVOLVED INDEX (Range 0 - 10)	0
SMOKE DEVELOPED INDEX (Range 0 - 10)	3

#### Statement from the Standard.

The results of this fire test may be used to directly assess fire hazard, but it should be recognised that a single test method will not provide a full assessment of fire hazard under all fire conditions.

#### Statement from the Laboratory.

This statement appears on all of the Laboratory's test reports.

The Laboratory's experience is that the results of this fire test can be significantly modified by the detail of the specimens presented for testing.

The nature of substrate materials for example (where present) can significantly modify the test results.

The results reported apply to the material as described herein, and users of this test report are recommended to take particular note of the material description on page 1.

E. R. Weaver.

3 November 2005



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