

4710B BRADFORD THERMAL AND ACOUSTIC INSULATION

1. GENERAL

This section relates to **Bradford Insulation** materials installed, laid, hung or fitted as thermal and acoustic insulation:

- **Bradford Glasswool Blanket™**
- **Bradford Gold™ Ceiling Insulation**
- **Bradford Gold™ Wall Insulation**
- **Bradford SoundScreen™**
- **Bradford Acoustic Gold™**

1.1 RELATED WORK

Refer to 4161 WRAPS, UNDERLAYS AND DPC for building wraps and roofing underlays.

1.2 ABBREVIATIONS AND DEFINITIONS

The following abbreviations are used throughout this part of the specification:

BIB	building insulation blanket
IIC	impact insulation class
NRC	noise reduction coefficient
Rw	weighted sound reduction index
STC	sound transmission class rating

The following definitions apply specifically to this section:

Segments Term used for segments of insulation

Documents

1.3 DOCUMENTS

Refer to the general section 1233 REFERENCED DOCUMENTS. The following documents are specifically referred to in this section:

NZBC G6/VM1	Airborne and impact sound
NZBC H1/AS1	Energy efficiency
NZS 4218:2004	Energy Efficiency - Small building envelope
NZS 4246	Energy efficiency - Installing insulation in residential buildings
ISO 140	Acoustics Part 4: Field measurements of airborne sound insulation between rooms
NZCEP 54	Code of practice for electrical installations of recessed luminaires and auxiliary equipment

Documents listed above and cited in the clauses that follow are part of this specification. However, this specification takes precedence in the event of it being at variance with the cited document.

1.4 MANUFACTURER/SUPPLIER DOCUMENTS

CSR Bradford Insulation documents related to work in this section are:

CSR Bradford Insulation product manual

Data sheets	Bradford Glasswool Blanket™
Data sheets	Bradford Gold™ Ceiling Insulation
Data sheets	Bradford Gold™ Wall Insulation
Data sheets	Bradford SoundScreen™
Data sheets	Bradford Acoustic Gold™

[BRANZ Appraisal 301](#) - CSR Bradford Gold Insulation™ Glasswool Insulation
Environmental Choice NZ License No. 2508039 CSR Bradford Gold Insulation

Manufacturer/supplier contact details

Web:	www.bradfordinsulation.co.nz
Email:	bradford@csr.co.nz
Telephone:	0800 277 123
Facsimile:	09 968 2199

Warranties

- 1.5 **WARRANTY - MANUFACTURER/SUPPLIER**
Provide a manufacturer/supplier warranty:
- For Bradford thermal insulation products.
 - Provide this warranty on the **Lifetime Warranty Certificate**, when installed by Bradford preferred installer.

Requirements

- 1.6 **QUALIFICATIONS**
Work to be carried out by tradesmen experienced, competent and familiar with the **Bradford** materials and techniques specified.

- 1.7 **NO SUBSTITUTIONS**
Substitutions are not permitted to any specified **Bradford** systems, or associated components and products.

Performance

- 1.8 **SOUND RATING REQUIREMENTS**
Provide sound rated wall, floor and ceiling systems as scheduled.

2. PRODUCTS

Materials

- 2.1 **GLASSWOOL BLANKET INSULATION**
Bradford Glasswool Blanket™, a lightweight, compressible insulation material manufactured from the controlled felting of glasswool, bonded with a thermosetting resin. Refer to SELECTIONS for R-value, thickness and optional facing.

- 2.2 **GLASSWOOL CEILING INSULATION - SEGMENTS**
Bradford™ Gold Ceiling Insulation, a resilient and compressible insulation material manufactured from the controlled felting of glasswool, bonded with a thermosetting resin.

- 2.3 **GLASSWOOL WALL INSULATION- SEGMENTS**
Bradford Gold™ Wall Insulation, a resilient and compressible insulation material manufactured from the controlled felting of glasswool, bonded with a thermosetting resin, specifically stiffened for use in wall applications.

- 2.4 **ROCKWOOL ACOUSTIC SEGMENTS**
Bradford Soundscreen™ acoustic segments - molten mixture of natural rock and recycled blast furnace waste products and bonded with a thermosetting resin. Refer to SELECTIONS for type, R value and thickness.

- 2.5 **GLASSWOOL ACOUSTIC SEGMENTS**
Bradford Acoustic Gold™ acoustic segments - a resilient and compressible insulation manufactured from the controlled felting of glasswool bonded with a thermosetting resin. Manufactured to comply with AS 4859.1. Refer to SELECTIONS for type, R value and thickness.

3. EXECUTION

Conditions

- 3.1 **STORAGE**
Accept materials undamaged and dry and store in a location that protects them from the weather and damage. Avoid distortion, stretching, puncturing and damage to edges of sheet materials. Do not use damaged or wet insulation material.

3.2 HANDLING
Wear protective clothing as necessary and when handling, avoid delamination or distortion of the rectangular form. Maintain full thickness unless compression is an installation system requirement.

3.3 INSPECTION
Before commencing installation, check that the location and framing are free from moisture, that the cavities are not interconnected and that mesh, building papers and vapour barriers are in place.

Application - generally

3.4 INSTALL INSULATION - GENERAL
Lay, install, fit and fix to [NZBC H1/AS1](#): Energy efficiency, 2.0 Building thermal envelope, and to manufacturer's requirements. Install in housing to [NZS 4218](#) and [NZS 4246](#). Install in large buildings to [NZS 4243.1](#) and NZS 4220. Allow insulation to re-loft/relax prior to installation. Do not cover vents and cut around all recessed light fittings and metal flues to the safety requirements of NZECP 54. Lift up electrical wires, lighting transformers/controllers and lay the insulation underneath.

3.5 CHECK WALL WRAPS AND ROOF UNDERLAYS
Ensure these are dry, clean, undamaged and free of debris before being covered.

3.6 CHECK VAPOUR BARRIERS
Ensure these form one homogeneous sheet vapour barrier and remain as such throughout the ensuing construction process.

Application - Bradford Gold™ insulation

3.7 FIT GLASSWOOL THERMAL INSULATION - WALL/CEILING
Friction fit **Bradford Gold™** insulating segments in place. Carefully scribe cut insulation slightly oversize to maintain friction fit to each other, to smaller spaces and around penetrations. Leave no gaps between, and maintain full thickness of the insulation over the whole of the installation. Do not cover vents and cut around all recessed light fittings and metal flues to the safety requirements of NZECP 54. Lift up electrical wires and lay the insulation underneath.

3.8 FIT GLASSWOOL THERMAL INSULATION - ROOF
Lay **Bradford Glasswool Blanket™** in the same direction and over the mesh/vapour barrier, firmly butting edges together. Carefully scribe cut blanket to maintain firmly butted edges and ends. Maintain full thickness of the blanket over the whole installation except where detailed otherwise.

Application - Bradford SoundScreen™

3.9 FIT ROCKWOOL ACOUSTIC SEGMENTS - INTERNAL WALLS
After the wall lining is fixed to one side of the partition, friction fit **Bradford SoundScreen™** acoustic segments in place. Carefully scribe cut, slightly oversize to retain friction fit to each other, smaller spaces and around services. Maintain full thickness of the insulation over the whole of the installation.

3.10 LAY ROCKWOOL ACOUSTIC SEGMENTS - MID FLOORS
Lay **Bradford SoundScreen™** acoustic segments loose over ceilings between battens and between truss chords. Leave no gaps and maintain full thickness over the whole of the installation. Do not cover vents and cut around all recessed light fittings/transformer or power box and metal flues to the safety requirements of NZECP 54. Lift up electrical wires and lay the segments underneath.

Application - Bradford Acousticgold™

3.11 FIT GLASSWOOL ACOUSTIC SEGMENTS - INTERNAL WALLS
After the wall lining is fixed to one side of the partition, friction fit **Bradford Acoustic Gold™** segments in place. Carefully scribe cut, slightly oversize to retain friction fit to

each other, smaller spaces and around services. Maintain full thickness of the insulation over the whole of the installation.

3.12 LAY GLASSWOOL ACOUSTIC SEGMENTS - MID FLOORS

Lay **Bradford Acoustic Gold™** segments loose over ceilings between battens and between truss chords. Leave no gaps and maintain full thickness over the whole of the installation. Do not cover vents and cut around all recessed light fittings/transformer or power box and metal flues to the safety requirements of NZECP 54. Lift up electrical wires and lay the segments underneath.

Completion

3.13 CLEAN UP

Clean up as the work proceeds, so no spare off cuts or any other matter or item remain behind claddings or linings.

3.14 LEAVE

Leave work to the standard required by following procedures.

3.15 REMOVE

Remove debris, unused materials and elements from the site.

4. SELECTIONS

Substitutions are not permitted to the following, unless stated otherwise.

4.1 GLASSWOOL BLANKET INSULATION

Location: ~
Brand: **Bradford Glasswool Blanket™**
R Value: R~
Thickness: ~mm
NRC: ~
Facing: ~

4.2 GLASSWOOL CEILING INSULATION - SEGMENTS

Location: Ceiling
Brand: **Bradford Gold™ Ceiling Insulation**
R Value: R~
Thickness: ~mm
NRC: ~

4.3 GLASSWOOL WALL INSULATION - SEGMENTS

Location: ~
Brand: **Bradford Gold™ Wall Insulation**
R Value: R~
Thickness: 90mm
NRC: ~

4.4 ROCKWOOL ACOUSTIC SEGMENTS

Location: ~
Brand: **Bradford SoundScreen™**
R Value: ~
Thickness: ~mm
Rw: ~

4.5 GLASSWOOL ACOUSTIC SEGMENTS

Location: ~
Brand: **Bradford Acoustic Gold™**
R Value: R1.8
Thickness: 75mm
Alpha W: 0.95

4711B BRADFORD THERMAL INSULATION

1. GENERAL

This section relates to **Bradford** thermal insulation materials installed, laid, hung or fitted as thermal insulation with acoustic properties:

- **Bradford Glasswool Blanket™**
- **Bradford Anticon™**
- **Bradford Gold™ Ceiling Insulation**
- **Bradford Gold™ Wall Insulation**

1.1 RELATED WORK

Refer to 4721B BRADFORD SOUNDSCREEN™ AND ACOUSTIC GOLD™ section for acoustic insulation.

Refer to 4161 WRAPS, UNDERLAYS AND DPC for building wraps and roofing underlays.

1.2 ABBREVIATIONS AND DEFINITIONS

Refer to the general section 1232 INTERPRETATION & DEFINITIONS for abbreviations and definitions used throughout the specification.

The following abbreviations apply specifically to this section:

BIB	building insulation blanket
NRC	noise reduction coefficient

The following definitions apply specifically to this section:

Segments	Term used for segments of insulation
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Documents

1.3 DOCUMENTS

Refer to the general section 1233 REFERENCED DOCUMENTS. The following documents are specifically referred to in this section:

NZBC H1/AS1	Energy efficiency
NZS 4218:2004	Energy Efficiency - Small building envelope
NZS 4243.1	Energy efficiency - Large buildings - Building thermal envelope
NZS 4246	Energy efficiency - Installing insulation in residential buildings
NZECP 54	Code of practice for electrical installations of recessed luminaires and auxiliary equipment
NZS 4859.1	Materials for the thermal insulation of buildings - General criteria and technical provisions

1.4 MANUFACTURER/SUPPLIER DOCUMENTS

CSR Bradford Insulation documents related to this section are:

Data sheets **Bradford Glasswool Blanket™**

Data sheets **Bradford Anticon™**

Data sheets **Bradford Gold™ Ceiling Insulation**

Data sheets **Bradford Gold™ Wall Insulation**

[BRANZ Appraisal 301](#) - CSR Bradford Gold Insulation™ Glasswool Insulation

Manufacturer/supplier contact details

Company:	CSR Bradford
Web:	http://www.bradfordinsulation.co.nz/
Email:	bradford@csr.co.nz
Telephone:	0800 277 123
Facsimile:	09 968 2199

Warranties

1.5 WARRANTY - MANUFACTURER/SUPPLIER

Provide a manufacturer/supplier warranty:

- For Bradford thermal insulation products.

- Provide this warranty on the Bradford **Lifetime Warranty Certificate**, when installed by Bradford preferred installer.

Requirements

- 1.6 QUALIFICATIONS
Work to be carried out by tradesmen experienced, competent and familiar with the **Bradford** materials and techniques specified.
- 1.7 NO SUBSTITUTIONS
Substitutions are not permitted to any specified **Bradford** system, or associated components and products.
- 2. PRODUCTS**
- 2.1 GLASSWOOL BLANKET INSULATION
Bradford Glasswool Blanket™, a lightweight insulation material manufactured from the controlled felting of glasswool, bonded with a thermosetting resin. Refer to SELECTIONS for R-value, thickness and optional facing.
- 2.2 GLASSWOOL ROOFING BLANKET INSULATION
Bradford Anticon™, a lightweight insulation material manufactured from a random felted mat of glass wool bonded with a thermosetting resin, with reinforced laminated **Bradford** Thermofoil adhered to one face. The foil is extended 150mm beyond one longitudinal edge of the blanket.
- 2.3 GLASSWOOL CEILING INSULATION - SEGMENTS
Bradford Gold™ Ceiling Insulation, a resilient and compressible insulation material manufactured from the controlled felting of glasswool, bonded with a thermosetting resin.
- 2.4 GLASSWOOL WALL INSULATION- SEGMENTS
Bradford Gold™ Wall Insulation, a resilient and compressible insulation material manufactured from the controlled felting of glasswool, bonded with a thermosetting resin, specifically stiffened for use in wall and floor applications.
- 3. EXECUTION**
- Conditions**
- 3.1 STORAGE
Accept materials undamaged and dry and store in a location that protects them from the weather and damage. Avoid distortion, stretching, puncturing and damage to edges of sheet materials. Do not use damaged or wet insulation material.
- 3.2 HANDLING
Wear protective clothing as necessary and when handling, avoid delamination or distortion of the rectangular form. Maintain full thickness friction fit.
- 3.3 INSPECTION
Before starting installation of **Bradford Glasswool Blanket™** or **Bradford Gold™** segments, check that the location and framing are free from moisture, that the cavities are not interconnected and that mesh, building papers and vapour barriers are in place.
- Application - generally**
- 3.4 INSTALL INSULATION - GENERAL
Lay, install, fit and fix to [NZBC H1/AS1](#): Energy efficiency, 2.0 Building thermal envelope, and to manufacturer's requirements. Install in housing to [NZS 4218](#) and [NZS 4246](#). Install in large buildings to [NZS 4243.1](#) and NZS 4220. Allow insulation to re-loft/relax prior to installation. Do not cover vents and cut around all recessed light fittings and metal flues to the safety requirements of NZECP 54. Lift up electrical wires, lighting transformers/controllers and lay the insulation underneath.

- 3.5 CHECK FOILS
Ensure foils are dry, clean, bright, undamaged and free of debris before being covered.
- 3.6 CHECK WALL WRAPS AND ROOF UNDERLAYS
Ensure these are dry, clean, undamaged and free of debris before being covered.
- 3.7 CHECK VAPOUR BARRIERS
Ensure these form one homogeneous sheet vapour barrier and remain as such throughout the ensuing construction process.

Application

- 3.8 FIT GLASSWOOL THERMAL INSULATION - WALL/CEILING
Friction fit **Bradford Gold™** insulating segments in place. Carefully scribe cut insulation slightly oversize to maintain friction fit to each other, to smaller spaces and around penetrations. Leave no gaps between, and maintain full thickness of the insulation over the whole installation. Do not cover vents and cut around all recessed light fittings and metal flues to the safety requirements of NZECP 54. Lift up electrical wires and lay the insulation underneath.
- 3.9 FIT GLASSWOOL THERMAL INSULATION - ROOF
Lay **Bradford Glasswool Blanket™** in the same direction and over the mesh/vapour barrier, firmly butting edges together. Carefully scribe cut blanket to maintain firmly butted edges and ends. Maintain full thickness of the blanket over the whole installation except where detailed otherwise.

Completion

- 3.10 CLEAN UP
Clean up as the work proceeds, so no spare offcuts or any other matter or item remain behind claddings or linings.
- 3.11 LEAVE
Leave work to the standard required by following procedures.
- 3.12 REMOVE
Remove debris, unused materials and elements from the site.

4. SELECTIONS

Substitutions are not permitted to the following, unless stated otherwise.

- 4.1 GLASSWOOL BLANKET INSULATION
Location: ~
Brand: **Bradford Glasswool Blanket™**
R Value: R~
Thickness: ~mm
NRC: ~
Facing: ~
- 4.2 GLASSWOOL ROOFING BLANKET INSULATION
Location: Roof
Brand: **Bradford Anticon™ Roofing Blanket**
Foil: 729
R Value: R~
Thickness: ~mm
NRC: ~
- 4.3 GLASSWOOL CEILING INSULATION - SEGMENTS
Location: Ceiling
Brand: **Bradford Gold™ Ceiling Insulation**
R Value: R~
Thickness: ~mm
NRC: ~

4.4 GLASSWOOL WALL INSULATION - SEGMENTS
Location: ~
Brand: **Bradford Gold™ Wall Insulation**
R Value: R~
Thickness: 90mm
NRC: ~