



BARITEC™

SUBSILL FLASHING SYSTEM

The advanced weatherproofing solution

MARLBOROUGH DISTRICT COUNCIL
BUILDING CONSENT AUTHORITY
APPROVED DOCUMENTS

Signed:



Date:

12 Oct 2016

ALL WORK IS TO COMPLY WITH THE CONSENTED DOCUMENTS & THE NZ BUILDING CODE
DO NOT MAKE CHANGES WITHOUT PRIOR APPROVAL

Rigid,
non-adhesive
alternative to
flashing tape

Install in
any weather
conditions

Use with any
flexible building
wrap or RAB
membrane

Reduce Risk
Save Time
Save Labour



BRANZ Appraised
Appraisal No. 857 [2014]

Product Description

Date Approved: 12/10/2016

MARLBOROUGH DISTRICT COUNCIL

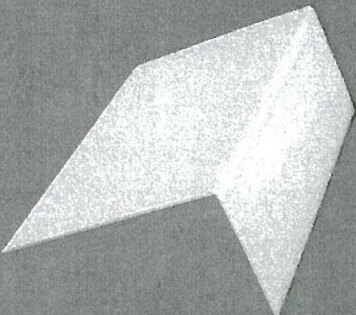
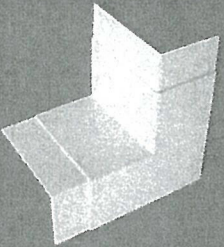
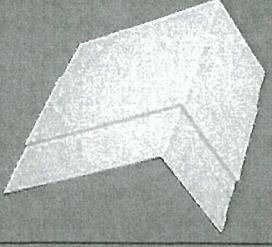

Designed in New Zealand, the Baritec system provides a window and door flashing solution that is solid, durable and can be installed in any weather conditions.

Baritec is easy to install, with interlocking components requiring no adhesion to the substrate, significantly reducing the possibility of weathertightness failure or degradation of substrate surface.

Formed from two main components - an extruded length profile and an injection molded corner soaker, Baritec is specifically designed to accommodate flexible wrap or any flat sheet RAB membrane. It can also be used with direct fix weatherboards and retrofit windows.

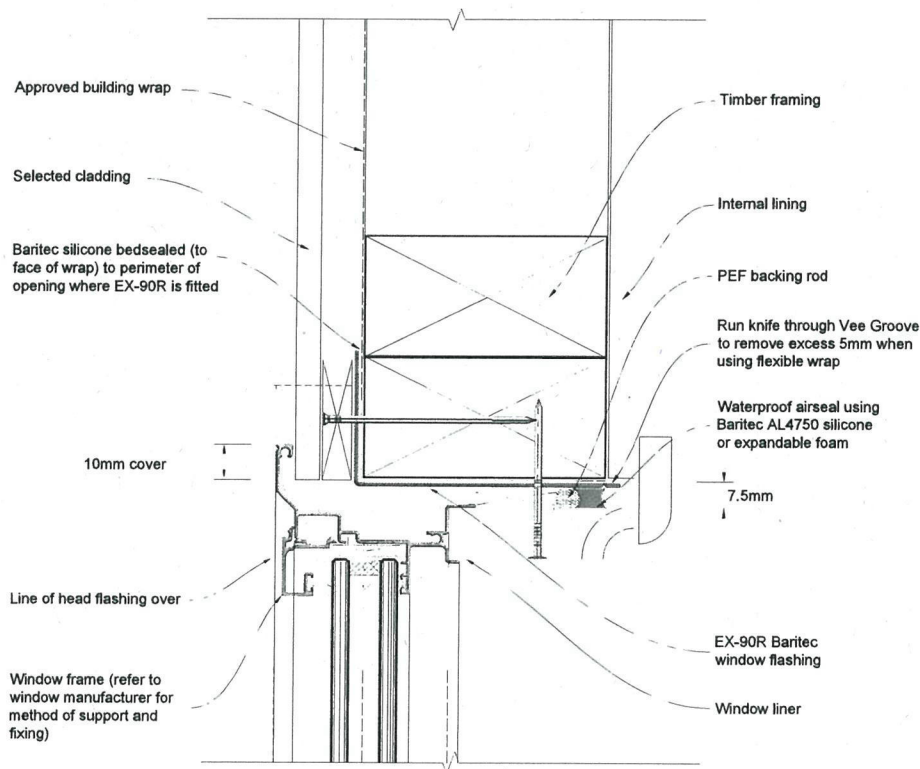
The Baritec AL4570 silicone is specially formulated for use with ASA plastic, but is also suitable for bonding to wood, fibre cement and other porous surfaces. The silicone is E2 / AS1 compliant.

System Components

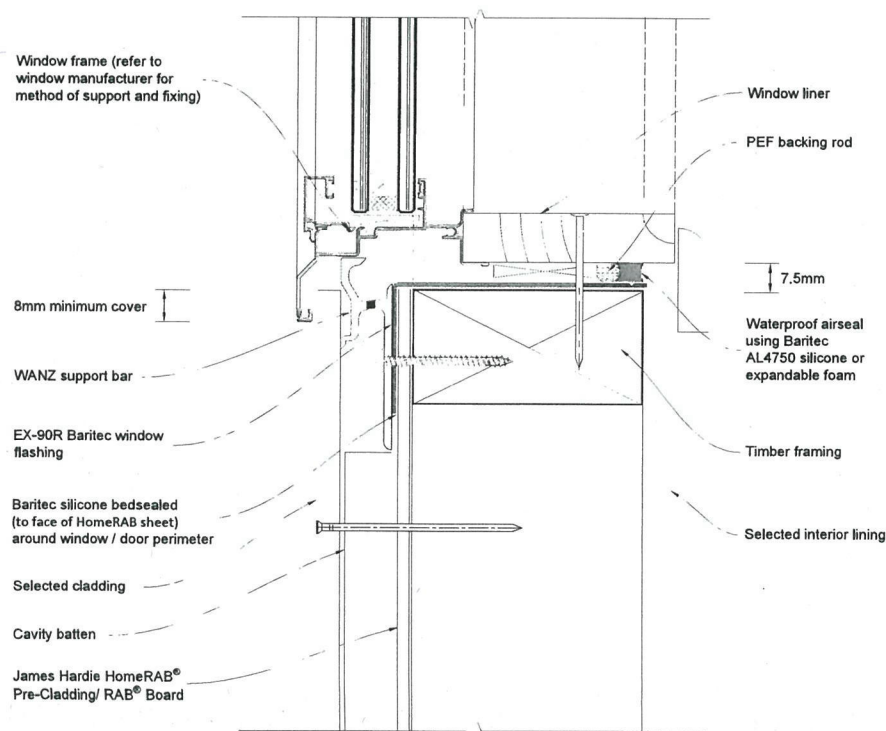
	Baritec EX-90R	Sill, jamb and head extrusion for 90mm timber framing extruded to 4.2m lengths.	10 x 4.2m lengths per pack
	Baritec EX-145R	Sill, jamb and head extrusion for 145mm timber framing extruded to 4.2m lengths.	10 x 4.2m lengths per pack
	Baritec EX-90-200	Extrusion for 90mm timber framing cut to 200mm lengths for vertical upstands to use with flexible wrap.	10 x 200mm lengths per pack
	Baritec EX-145-200	Extrusion for 145mm timber framing cut to 200mm lengths for vertical upstands to use with flexible wrap.	10 x 200mm lengths per pack
	Baritec CS-90R	Corner Soaker units for 90mm timber framing	30 per box
	Baritec CS-145R	Corner Soaker units for 145mm timber framing	30 per box
	Baritec JS-90R	Joint Soaker for interconnecting 90mm extrusions	30 per box
	Baritec JS-145R	Joint Soaker for interconnecting 145mm extrusions	30 per box
	Baritec AL4570	Silicone for watertight bonding of Baritec system components and Airseals - 600ml	20 per box

Sectional Details

Typical Jamb Detail - double stud 90mm framing using Flexible Wrap

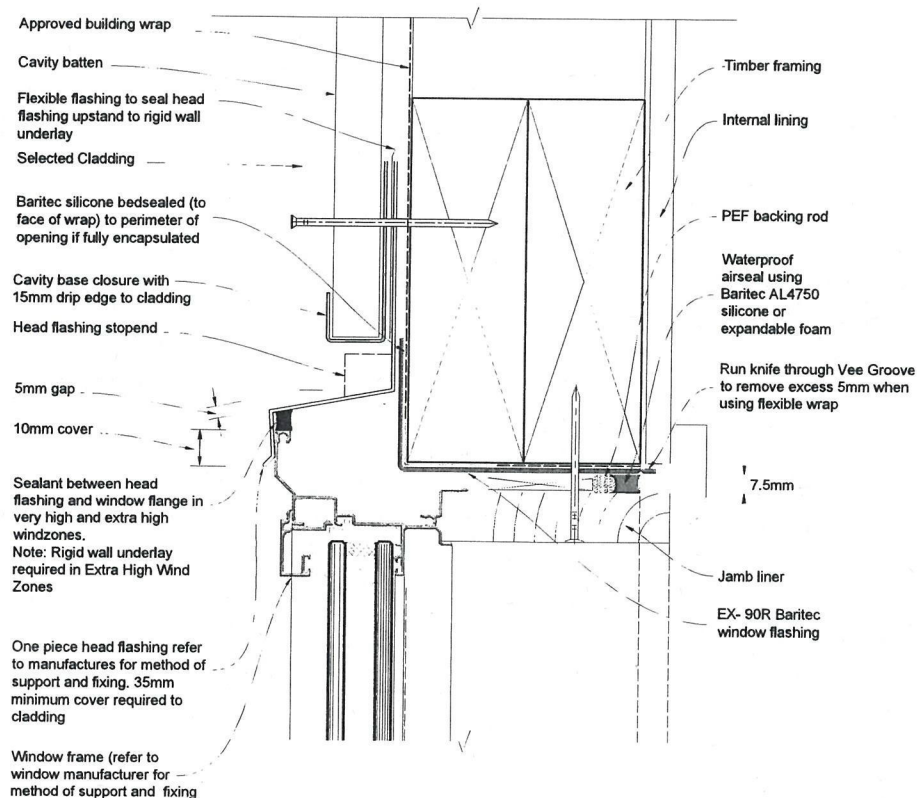


Typical Sill Detail - 90mm framing using RAB

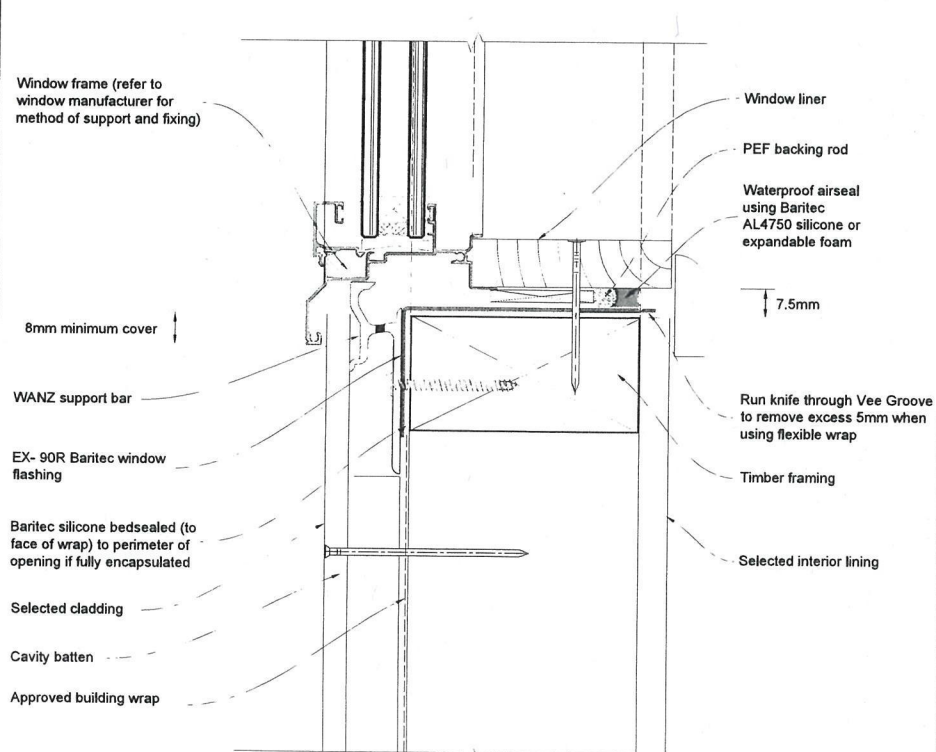


Sectional Details

Typical Head Detail - 90mm framing using Flexible Wrap



Typical Sill Detail - 90mm framing using Flexible Wrap



Benefits

- ✓ Unlike its competitors, the Baritec system does not rely on adhesion to the substrate
- ✓ Unique interlocking joints eliminate common corner junction failure.
- ✓ Can be installed in all weather conditions without added labour requirements
- ✓ No extra work required to install in cold frosty conditions (heat guns and tack sprays)
- ✓ Builders' feedback shows the Baritec system is significantly faster to install than the current methods
- ✓ Is UV stable with a long life span
- ✓ Can be used with building wrap or any flat sheet RAB membrane on the market
- ✓ Creates a flat, watertight perimeter for window airsealing, decreasing the risk of air infiltration and water ingress
- ✓ 15 year warranty on all Baritec components
- ✓ Can be used on both timber and steel stud framing
- ✓ Suitable for use in all wind zones of NZS3604 up to and including "Extra High"
- ✓ Use Baritec AL4570 silicone for wetseals if specified, but also compatible for use with any inert expanding foam product approved for airsealing

BRANZ Appraisal

Tested and appraised as durable for 90 days UV exposure, up to three times longer than some flexible flashing tapes. This is especially useful on large construction sites where cladding can take longer than a month to install.

The Baritec system can be used on any project specified for the use of NZBC compliant flexible flashing tapes without the need to seek council approval for substitution.

Installation can be undertaken by anyone with general building experience, following Baritec's installation guidelines. These are available for download from www.baritec.co.nz.

Technical Specifications

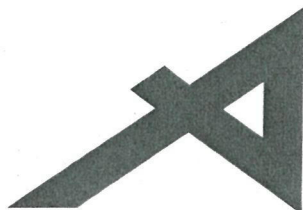
All rigid components are manufactured from an inert malleable form of plastic (ASA). Technical data sheets are available for download from www.baritec.co.nz.

AL4570 silicone is neutral cure, and E2 / AS1 compliant. Information, technical and safety datasheets are available for download from www.baritec.co.nz.



Baritec
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NZ Patent No. 620667

**BRANZ Appraised**

Appraisal No. 857 [2014]

**BARITEC SUBSILL
FLASHING SYSTEM**

Appraisal No. 857 [2014]

Amended 14 December 2015.

BRANZ Appraisals

Technical Assessments of
products for building and
construction.

**Barrier Technologies Ltd****T/A Baritec**

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New Zealand
Tel: 04 237 1170
branz.co.nz

**Product**

- 1.1 The Baritec Subsill Flashing System is a rigid flashing system for use around framed joinery openings as a secondary weather resistant barrier. It is designed for use as an alternative solution to flexible flashing tape systems.
- 1.2 The system is installed into and around the framed joinery opening to cover both the face and edge of the opening framing.

Scope

- 2.1 The Baritec Subsill Flashing System has been appraised as a flashing system for use around window and door joinery openings for buildings within the following scope:
 - constructed with timber framing in accordance with the scope limitations of NZBC Acceptable Solution E2/AS1; or,
 - constructed with steel framing subject to specific engineering design with building height and floor plan area scope limitations in accordance with NZBC Acceptable Solution E2/AS1, Paragraph 1.1; and,
 - with a risk score of 0-20, calculated in accordance with NZBC Acceptable Solution E2/AS1, Table 2; and,
 - with wall cladding systems complying with NZBC Acceptable Solution E2/AS1 or a valid BRANZ Appraisal that specifies a rigid or flexible flashing system; and,
 - with flexible and rigid wall underlays complying with the NZBC; and,
 - situated in NZS 3604 Wind Zones up to, and including, Extra High.

Building Regulations**New Zealand Building Code [NZBC]**

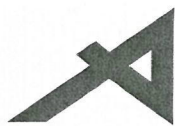
- 3.1 **In the opinion of BRANZ, the Baritec Subsill Flashing System, if designed, used, installed and maintained in accordance with the statements and conditions of this Appraisal, will meet or contribute to meeting the following provisions of the NZBC:**

Clause B2 DURABILITY: Performance B2.3.1 (b), 15 years and B2.3.2. The Baritec Subsill Flashing System meets these requirements. See Paragraphs 8.1 and 8.2.

Clause E2 EXTERNAL MOISTURE: Performance E2.3.2. The Baritec Subsill Flashing System contributes to meeting this requirement. See Paragraphs 7.1 - 7.4 and 11.1.

Clause F2 HAZARDOUS BUILDING MATERIALS: Performance F2.3.1. The Baritec Subsill Flashing System meets this requirement and will not present a health hazard to people.

- 3.2 This is an Appraisal of an **Alternative Solution** in terms of New Zealand Building Code compliance. See Paragraph 7.3.



Technical Specification

- 4.1 System components and accessories supplied by BARITEC are:
- **Baritec EX-90R sill, jamb and head sections** for 90 mm framing and Baritec EX-145R sill, jamb and head sections for 145 mm framing. The Baritec EX-90R and EX-145R sections are extruded from Acrylonitrile Styrene Acrylate (ASA) in lengths 4.2 m long, and are coloured white.
 - **Baritec EX-90-200R and EX-145-200R precut 200 mm up stands** - for sill + 200 flexible wrap installation method.
 - **Baritec CS-90R corner soaker units** for 90 mm framing or Baritec CS-145R corner soaker units for 145 mm framing. The corner soakers are made from Acrylonitrile Styrene Acrylate (ASA) and are coloured white.
 - **Baritec JS-90R or JS-145R joint soaker units** to connect extruded lengths of EX-90R or EX-145R sill, jamb and head sections where the opening is wider or taller than 4.2 m. The joint soaker units are made from Acrylonitrile Styrene Acrylate (ASA) and are coloured white.
 - **Baritec AL4570 Silicone** for watertight bonding of Baritec Subsill Flashing System components and forming airseals.
- 4.2 Accessories used with the system which are supplied by the installer are:
- **Fixings** - stainless steel staples, clouts or screws to attach the Baritec sill, jamb and head section and corner soaker units to the frame.
 - **Flexible wall underlay** - underlay complying with NZBC Acceptable Solution E2/AS1, Table 23, or covered by a valid BRANZ Appraisal for use as a wall underlay.
 - **Rigid wall underlay** - Plywood or fibre cement sheet complying with NZBC Acceptable Solution E2/AS1, Table 23.

Handling and Storage

- 5.1 Handling and storage of all materials supplied by BARITEC, whether on or off site, is under the control of the installer. The Baritec Subsill Flashing System must be protected from damage and weather. System components and accessories must be stored flat and under cover, in clean, dry conditions away from direct exposure to sunlight.

Technical Literature

- 6.1 Refer to the Appraisals listing on the BRANZ website for details of the current Technical Literature for the Baritec Subsill Flashing System. The Technical Literature must be read in conjunction with this Appraisal. All aspects of design, use, installation and maintenance contained in the Technical Literature and within the scope of this Appraisal must be followed.

Design Information

General

- 7.1 The Baritec Subsill Flashing System is designed to prevent air leakage and water penetration around window and door openings at framing junctions [e.g. at the sill trimmer and opening stud junction], and to keep any water that gets past the cladding, or through the joinery, from direct contact with the framing.
- 7.2 The use of flashing systems around window and door joinery openings is critical to assist the overall weathertightness performance of window and door joinery installations.
- 7.3 The Baritec Subsill Flashing System has been assessed against BRANZ criteria which was developed for the evaluation of rigid flashing systems. The evaluation criteria for flexible flashings referenced by NZBC Acceptable Solution E2/AS1, Paragraph 9.1.5 (b), is not appropriate for rigid flashing systems. The installation method for the Baritec Subsill Flashing System is an alternative solution to the installation method shown within NZBC Acceptable Solution E2/AS1, Figures 72A and 72B.



BRANZ Appraisal
Appraisal No. 857 [2014]
13 May 2014

BARITEC SUBSILL FLASHING
SYSTEM

- 7.4 The Baritec Subsill Flashing System is not designed to overcome poor detailing and workmanship of the window or door joinery installation. The system must not be considered in isolation, but be considered as part of the wall cladding system. The Baritec Subsill Flashing System is designed to be used in conjunction with air seals and joinery flashing systems, not as a substitute.
- 7.5 When the Baritec Subsill Flashing System is used in conjunction with LOSP (light organic solvent preservative) treated timber, the solvent from the timber treatment must be allowed to evaporate [generally at least one week] prior to the installation of the system.

Durability

- 8.1 Assessment of durability to meet the NZBC is based on difficulty of access and replacement, and the ability to detect failure of the Baritec Subsill Flashing System both during normal use and maintenance of the building.

Serviceable Life

- 8.2 Provided it is not exposed to the weather or ultra-violet light for a total of more than 90 days, and provided the exterior cladding is maintained in accordance with the cladding manufacturer's instructions and the cladding remains weather resistant, the Baritec Subsill Flashing System is expected to have a serviceable life equal to that of the cladding. The maximum exposure period may however be limited by the requirements of the wall underlay supplier.

Maintenance

- 9.1 No maintenance is required for the Baritec Subsill Flashing System. Regular checks, at least annually, must be made of the junctions between the joinery and wall cladding to ensure that they are maintained weathertight and that the primary means of weather resistance for the junction e.g. flashing, sealant, etc continues to perform its function, to ensure that water will not penetrate the cladding.

Prevention of Fire Occurring

- 10.1 The Baritec Subsill Flashing System must be separated from fireplaces, heating appliances, flues and chimneys in accordance with the requirements of NZBC Acceptable Solutions C/AS1 to C/AS6, Paragraph 7.5.9.

External Moisture

- 11.1 Where a cladding manufacturer specifies the use of generic flexible flashing tapes around window and door joinery openings at framing junctions as part of their system, or they specify the use of flexible flashing tapes that comply with NZBC Acceptable Solution E2/AS1, Paragraph 9.1.5 (b), the Baritec Subsill Flashing System may be used.
- 11.2 Where a proprietary cladding manufacturer or wall underlay supplier specifies flexible flashing tapes as part of their system, permission must be obtained from the cladding manufacturer or underlay supplier before the flexible flashing tape is substituted with the Baritec Subsill Flashing System.

Installation Information

Installation Skill Level Requirements

- 12.1 Installation of the Baritec Subsill Flashing System must be completed by tradespersons with an understanding of wall penetration flashing systems, in accordance with instructions given within the Baritec Subsill Flashing System Technical Literature and this Appraisal.

System Installation

- 13.1 Before the Baritec Subsill Flashing System is applied, the substrate should be clean, dry and free from surface contaminants.



Rigid Wall Underlays

- 13.2 The corner soakers are fitted into all corners of the opening and are secured in place by stapling, nailing or screwing to the frame through the back leg. The extrusion is cut to fit between the corner soakers along the sill, up both jambs and along the head of the opening. The soakers and extrusions are cleaned with a suitable cleaning agent, Iso-Propyl Alcohol or Methylated spirits, before sealing and fixing in place.
- 13.3 A bead of sealant is applied into the reduced flange portion and back leg flange of both opposing corner soakers at the sill, then the extruded is fitted. A nail or screw is inserted through the back leg to secure. This is repeated for both jambs and head.
- 13.4 The selected wall underlay is installed around the perimeter of the wall and finish into the Baritec Subsill Flashing System.

Flexible Wall Underlays

- 13.5 The selected flexible wall underlay must be installed in accordance with the manufacturer's instructions before the Baritec Subsill System is installed. The wall underlay should be run over openings until the Baritec system is ready for installation. Openings are formed in the underlay by cutting on a 45 degree diagonal from each corner of the penetration. The flaps of the cut underlay must be folded inside the opening and stapled to the penetration framing. Excess underlay may be cut off flush with the internal face of the wall frame.
- 13.6 The Baritec Subsill System must then be installed in accordance with Paragraphs 13.2 and 13.3. The Baritec Subsill System components must be sealed around the opening to the face of the flexible underlay with a bead of Baritec AL4570 silicone.
- 13.7 When using the Sill + 200 mm option a continuous bead of silicone should be applied to the face of the flexible building wrap within 50 mm of the opening. This bead should be 250 mm up the jambs and across the sill face for both the exterior and interior of the opening. The same process applies to the head of the opening. Once the silicone has been applied the flashing components should be installed and nailed or stapled as per standard installation.

General

- 13.8 If the Baritec Subsill Flashing System is exposed to the weather or UV light for more than 90 days, then it must be replaced.

Inspections

- 13.9 The Technical Literature must be referred to during the inspection of Baritec Subsill Flashing System installations.

Basis of Appraisal

The following is a summary of the technical investigations carried out:

Tests

- 14.1 The Baritec Subsill Flashing System has been tested to BRANZ criteria to assess the tensile strength and impact resistance of control and UV aged material and nail sealability. BRANZ has determined that the Baritec Subsill Flashing System is fit for purpose for the intended use.

Other Investigations

- 15.1 An assessment was made of the durability of the Baritec Subsill Flashing System by BRANZ technical experts.
- 15.2 Site inspections were carried out by BRANZ to examine the practicability of installation.
- 15.3 The Technical Literature has been reviewed by BRANZ and found to be satisfactory.



Quality

- 16.1 The manufacture of the Baritec Subsill Flashing System has been examined by BRANZ, including methods adopted for quality control. Details of the quality and composition of the materials used were obtained and found to be satisfactory.
- 16.2 The quality of supply to the market is the responsibility of BARITEC.
- 16.3 Designers are responsible for the building design, and building contractors are responsible for the quality of installation of framing systems and wall underlays in accordance with the instructions of the designer.
- 16.4 The quality of installation, handling and storage on site is the responsibility of the installer in accordance with the instructions of BARITEC.

Sources of Information

- NZS 3604: 2011 Timber-framed buildings.
- Compliance Document for New Zealand Building Code External Moisture Clause E2, Department of Building and Housing, Third Edition July 2005 [Amendment 6, 14 February 2014].
- Ministry of Business, Innovation and Employment Record of Amendments for Compliance Documents and Handbooks.
- The Building Regulations 1992.

Amendments

Amendment No. 1, dated 14 December 2015.

This Appraisal has been amended to update a change in the Baritec Subsill Flashing System profile.



BRANZ Appraisal
Appraisal No. 857 [2014]
13 May 2014



In the opinion of BRANZ, Baritec Subsill Flashing System is fit for purpose and will comply with the Building Code to the extent specified in this Appraisal provided it is used, designed, installed and maintained as set out in this Appraisal.

The Appraisal is issued only to Barrier Technologies Ltd T/A Baritec, and is valid until further notice, subject to the Conditions of Appraisal.

Conditions of Appraisal

1. This Appraisal:
 - a) relates only to the product as described herein;
 - b) must be read, considered and used in full together with the Technical Literature;
 - c) does not address any Legislation, Regulations, Codes or Standards, not specifically named herein;
 - d) is copyright of BRANZ.
2. Barrier Technologies Ltd T/A Baritec:
 - a) continues to have the product reviewed by BRANZ;
 - b) shall notify BRANZ of any changes in product specification or quality assurance measures prior to the product being marketed;
 - c) abides by the BRANZ Appraisals Services Terms and Conditions.
 - d) Warrants that the product and the manufacturing process for the product are maintained at or above the standards, levels and quality assessed and found satisfactory by BRANZ pursuant to BRANZ's Appraisal of the product.
3. BRANZ makes no representation or warranty as to:
 - a) the nature of individual examples of, batches of, or individual installations of the product, including methods and workmanship;
 - b) the presence or absence of any patent or similar rights subsisting in the product or any other product;
 - c) any guarantee or warranty offered by Barrier Technologies Ltd T/A Baritec.
4. Any reference in this Appraisal to any other publication shall be read as a reference to the version of the publication specified in this Appraisal.
5. BRANZ provides no certification, guarantee, indemnity or warranty, to Barrier Technologies Ltd T/A Baritec or any third party.

For BRANZ

Chelydra Percy

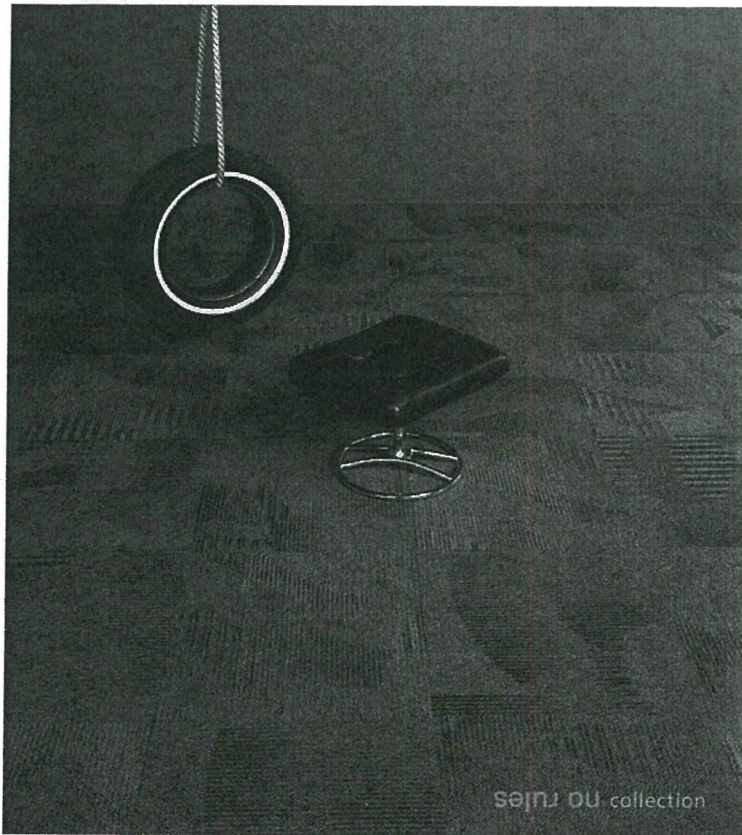
Chief Executive

Date of Issue:

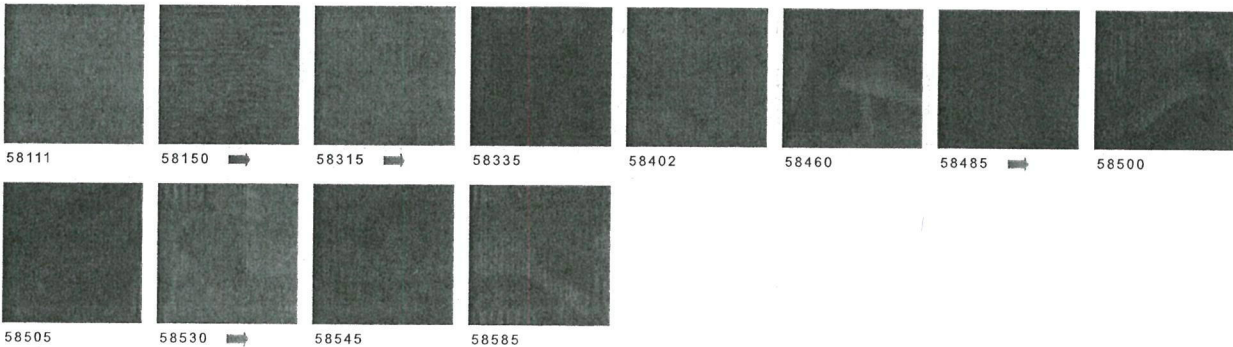
13 May 2013

BC161010**APPROVED DOCUMENTS****shaw** contract group®**Date Approved: 12/10/2016**SALES REP LOCATOR | SEARCH > GO**MARLBOROUGH DISTRICT COUNCIL**

carpet hardwood hard surface specialty products quick ship market segments design sustainability performance design is...theblog

kinetic tile 59359**Colors**

Up to 2,500 yards ship in 2 weeks or less for these colors
 Available for immediate shipment for these colors

**Marlborough District Council****Date Received: 13/9/2016**

BC161010

APPROVED DOCUMENTS

Date Approved: 12/10/2016

MARLBOROUGH DISTRICT COUNCIL

shaw contract group®

tile specifications

style name	kinetic tile
style number	59359
construction	multi-level pattern loop
fiber	eco solution q® nylon
dye method	86% solution dyed / 14% yarn dyed

u.s.

metric

pattern repeat	none	
tufted weight	18.0	610.30 g/m²
gauge	1/12	47.24 per 10 cm
stitches per inch	9.0	35.43 per 10 cm
finished pile thickness	0.085	2.16 mm
total thickness	0.268	6.81 mm
average density	7624	14.20 kilotex
product size	24" x 24"	60.96 cm x 60.96 cm
primary backing	synthetic	
secondary backing	ecoworx® tile	
protective treatments	ssp® shaw soil protection	
gsa approved product	yes	



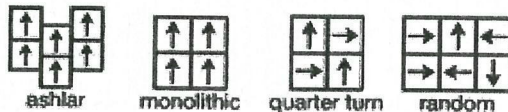
testing

radiant panel	Class I
nbs smoke	less than 450
electrostatic propensity	less than 3.5 kv

warranties

lifetime commercial limited

installation method



coordinating products

shadow play tile, blox tile, color play tile, simply done tile, nothing to it tile, captivate tile, intrigue tile, smp captivate tile, diffuse tile, disperse tile, chroma tile, spectrum tile, smp chroma tile, on a roll, free for all, think big, surefit, smp navajo ew24 tile, banyan tree tlk, timbermill tlk, mulberry tlk, sentinel pointe tlk

environmental certification

green label plus certification number	glp 9968
nsf140 gold	
cradle to cradle v3.1 silver certified	



Specifications are subject to nominal manufacturing variances.

Material supply and/or manufacturing processes may necessitate changes without notice.

shawcontractgroup.com | 1 800.257.7429 | shawcontractgroup.cn | +86 400 800 7429 (Asia Pacific)

Marlborough District Council

Date Received: 13/9/2016

shaw contract group

eco impacts

end of life

environmental guarantee

free pick up & recycling

To recycle call 800.509.Shaw or +86 400 800 Shaw (Asia Pacific)

materials

ingredients

face fiber

nylon 6

dye method

86% solution dyed / 14% yarn dyed

backing

polyolefin composite

surface treatments

non c8 fluorocarbon chemistry

does not contain PVC, phthalates, or PBD/PBDE

recycled content

total recycled content (by weight)

36.0 %

pre-consumer

36.0 %

post-consumer

0.0 %

bio-based/rapidly renewable content (by weight)

0.0 %

packaging

100% recyclable

country of origin (manufacturer)

USA

Meets or exceeds all local and national regulations in country of manufacture.

Manufactured in an ISO9001 & ISO14001 certified facility or equivalent.

Recycled content is calculated using system allocation, mass balance, and direct insertion.

The actual recycled content in this product will likely vary. For more information email

info@shawgreenedge.com.

third party certifications

Cradle to Cradle Certified

V3.1 silver

NSF 140

gold certified

CRI green label plus

GLP 9968

USGBC LEED

contributes



**Professional
Testing
Laboratory
Inc.**

TEST REPORT

TEST NUMBER	0081483
DATE	12/02/03
PAGE	1 of 2

CLIENT	STILE/DIVISION OF SHAW
---------------	------------------------

TEST METHOD CONDUCTED	AATCC Test Method 134-1996 Electrostatic Propensity of Carpets
------------------------------	----------------------------------------------------------------

DESCRIPTION OF TEST SAMPLE	
IDENTIFICATION	59359 Kinetic EW 24
COLOR	----
ROLL	SO-V0223
CONSTRUCTION	Loop Pile
FIBER	----
BACKING	EcoWorx
REFERENCE	TEST NO: 111703-17

TEST RESULTS

MAXIMUM VOLTAGE	NEG 2.7 KV
------------------------	------------

GENERAL PRINCIPLE

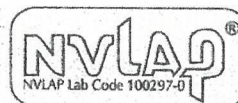
This method is designed to assess the static propensity of flooring material by controlled laboratory simulation of conditions which are known from experience to be strongly contributory to excessive accumulation of static charges.

A flooring material preconditioned to equilibrium at controlled atmospheric conditions is walked on by a test subject in a specified manner with specified shoe soles. The static charges which build up on the tester are monitored continuously by a recorder.

A neolite shoe sole has been chosen as the primary reference material because its static performance is much like that of many common leathers. It is a commonly used shoe sole material and can be easily cleaned, while its chemical and physical properties are quite uniform.

A chrome tanned leather shoe sole has been chosen for a secondary reference material because it is representative of a certain class of leathers whose performance differs significantly from that of neolite soles on certain carpet fiber. Statistically, chrome tanned leather comprises a very small percentage of the shoe sole market, but must be considered in critical applications.

This facility is accredited by the National Voluntary Laboratory Accreditation Program for the specific scope of accreditation under Lab Code 100297. This accreditation does not constitute an endorsement, certification, or approval by NIST or any agency of the United States Government for the product tested. This report is provided for the exclusive use of the client to whom it is addressed. It may be used in its entirety to gain product acceptance from duly constituted authorities. This report applies only to those samples tested and is not necessarily indicative of apparently identical or similar products. This report, or the name of Professional Testing Laboratory, Inc., shall not be used under any circumstance in advertising to the general public.



714 Glenwood Place

Dalton, GA 30721

706-226-3283

Fax: 706-226-6787

protest@alltel.net



**Professional
Testing
Laboratory
Inc.**

TEST REPORT

TEST NUMBER	0081483
DATE	12/02/03
PAGE	2 of 2

CLIENT	STILE/DIVISION OF SHAW
---------------	------------------------

TEST METHOD CONDUCTED	AATCC Test Method 134-1996 Electrostatic Propensity of Carpets
------------------------------	----------------------------------------------------------------

DESCRIPTION OF TEST SAMPLE	
IDENTIFICATION	59359 Kinetic EW 24
COLOR	----
ROLL	SO-V0223
CONSTRUCTION	Loop Pile
FIBER	----
BACKING	EcoWorx
REFERENCE	TEST NO: 111703-17

TEST CONDITIONS	The sample is conditioned to equilibrium and tested at 70 ± 2°F and 20 ± 2% relative humidity.
SAMPLE PREPARATION	Tested As Received
SUBSTRATE	Tested Over Grounded Metal Plate

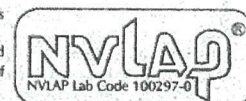
TEST RESULTS

	MAXIMUM VOLTAGE		
	DAY 1	DAY 2	AVERAGE
TEST I: Step Test/Neolite Sole	-1.4 KV	-1.3 KV	-1.4 KV
TEST II: Scuff Test/Neolite Sole	-2.6 KV	-2.8 KV	-2.7 KV
TEST III: Step Test/Leather Sole	+1.0 KV	+1.1 KV	+1.1 KV
TEST IV: Scuff Test/Leather Sole	+2.0 KV	+2.1 KV	+2.1 KV
MAXIMUM AVERAGE VOLTAGE	NEG 2.7 KV		

"The results of this test relate to the sample of flooring material tested. It's static performance may be altered in service as a result of wear, soiling, cleaning, temperature, relative humidity, etc..."

APPROVED BY: 

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714 Glenwood Place

Dalton, GA 30721

706-226-3283

Fax: 706-226-6787

protest@alltel.net

Marlborough District Council
Date Received: 13/9/2016



**Professional
Testing
Laboratory
Inc.**

TEST REPORT

TEST NUMBER	0081483
DATE	12/02/03
PAGE	1 of 2

CLIENT	STILE/DIVISION OF SHAW
---------------	------------------------

TEST METHOD CONDUCTED	ASTM E662-01 Specific Optical Density of Smoke Generated by Solid Materials, also referenced as NFPA 258
------------------------------	----------------------------------------------------------------------------------------------------------

DESCRIPTION OF TEST SAMPLE	
IDENTIFICATION	59359 Kinetic EW 24
COLOR	----
ROLL	SO-V0223
CONSTRUCTION	Loop Pile
FIBER	----
BACKING	EcoWorx
REFERENCE	TEST NO: 111703-17

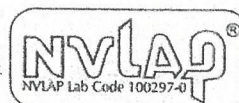
TEST RESULTS

FLAMING	179
----------------	-----

GENERAL PRINCIPLE

This procedure is designed to measure the specific optical density of smoke generated by the test specimen within a closed chamber. Each specimen is exposed to an electrically heated radiant-energy source positioned to provide a constant irradiance level of 2.5 watts/square cm on the specimen surface. Measurements are recorded through a photometric system employing a vertical beam of light and a photo detector positioned to detect the attenuation of light transmittance caused by smoke accumulation within the chamber. The light transmittance measurements are used to calculate specific optical density, a quantitative value which can be factored to estimate the smoke potential of materials. Two burning conditions can be simulated by the test apparatus. The radiant heating in the absence of ignition is referred to as the Non-Flaming Mode. A flaming combustion in the presence of supporting radiation constitutes the Flaming Mode.

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CLIENT	STILE/DIVISION OF SHAW
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CONSTRUCTION	Loop Pile
FIBER	----
BACKING	EcoWorx
REFERENCE	TEST NO: 111703-17

CONDITIONS	
PREDRYING OF TEST SAMPLE	24 Hours at 140 degrees F
CONDITIONING OF TEST SAMPLE	24 Hours at 70 degrees F and 50% relative humidity

FURNACE VOLTAGE	111 V	IRRADIANCE	2.5 watts/sq cm
CHAMBER TEMPERATURE	95 degrees F	CHAMBER PRESSURE	3" H2O
TEST MODE	Flaming		

AVERAGE MAXIMUM DENSITY CORRECTED (Dmc)	179
------------------------------------------------	-----

	1	2	3
Maximum Density (Dm)	201	253	164
Time to Dm (minutes)	4.5	5.0	4.5
Clear Beam (Dc)	28	33	21
Corr. Max Density (Dmc)	173	220	143
Density at 1.5 minutes	11	11	10
Density at 4.0 minutes	196	245	157
Time to 90% Dm (minutes)	3.5	3.5	3.5
Specimen Weight (grams)	19.9	19.4	19.6

AVERAGE SPECIFIC OPTICAL DENSITY AT 4.0 MINUTES: 199

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TEST REPORT

TEST NUMBER	0081483
DATE	12/02/03
PAGE	1 of 2

CLIENT	STILE/DIVISION OF SHAW
TEST METHOD CONDUCTED	ASTM E648-00 Critical Radiant Flux of Floor Covering Systems Using A Radiant Heat Energy Source, also referenced as NFPA 253 and FTM Standard 372

DESCRIPTION OF TEST SAMPLE	
IDENTIFICATION	59359 Kinetic EW 24
COLOR	----
ROLL	SO-V0223
CONSTRUCTION	Loop Pile
FIBER	----
BACKING	EcoWorx
REFERENCE	TEST NO: 111703-17

This test report relates to the installation in accordance with the criteria set forth in the report. Any variation in the criteria may produce different results.

TEST RESULTS

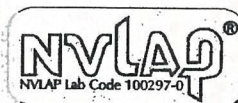
AVERAGE CRITICAL RADIANT FLUX	.75 Watts/Square Cm*
--------------------------------------	----------------------

GENERAL PRINCIPLE

This procedure is designed to measure the critical radiant flux at flame out, of horizontally mounted floor covering systems exposed to a flaming ignition in a test chamber which provides a graded radiant heat energy environment. The imposed radiant flux simulates the thermal radiation levels likely to impinge on the floors of a building whose upper surfaces are heated by flames of compartment. The test result is an average critical radiant flux (watts/square cm) which indicates the level of radiant heat energy required to sustain flame propagation in the flooring system. Theoretically, if a room fire does not impose a radiant flux that exceeds this critical level on a corridor floor covering system, flame spread will not occur.

The NFPA Life Safety Code 101 specifies as Class 1 Critical Radiant Flux of .45 watts/sq cm or higher and Class 2 Critical Radiant Flux as .22 - .44 watts/sq cm.

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CLIENT	STILE/DIVISION OF SHAW
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CONSTRUCTION	Loop Pile
FIBER	----
BACKING	EcoWorx
REFERENCE	TEST NO: 111703-17

This test report relates to the installation in accordance with the criteria set forth in the report. Any variation in the criteria may produce different results.

FLOORING SYSTEM ASSEMBLY	
SUBSTRATE UNDERLAYMENT ADHESIVE	Mineral-Fiber/Cement Board Direct Glue Down Sureset 5000
CONDITIONING	Each test sample was conditioned a minimum of 96 hours at 70 ± 5° F and 50 ± 5% relative humidity.

TEST RESULTS

TEST DATA	DISTANCE BURNED	TIME TO FLAME OUT	CRITICAL RADIANT FLUX
SPECIMEN 1	24 cm	20 minutes	.78 watts/sq cm
SPECIMEN 2	30 cm	38 minutes	.68 watts/sq cm
SPECIMEN 3	23 cm	30 minutes	.80 watts/sq cm

AVERAGE CRITICAL RADIANT FLUX	.75 watts/square cm*
STANDARD DEVIATION	.06 watts/square cm
COEFFICIENT OF VARIATION	9%

*NOTE: Meets or exceeds Class 1 rating as specified in NFPA Life Safety Code 101.

APPROVED BY: *Gary Ashbury*

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Marlborough District Council
Date Received: 13/9/2016

BC161010

APPROVED DOCUMENTS
Date Approved: 12/10/2016
MARLBOROUGH DISTRICT COUNCIL

Marlborough District Council
Date Received: 13/9/2016



GIB® Plasterboard range –
GIB® Standard, GIB Wideline®, GIB Ultraline®, GIB Ultraline® Plus, GIB Toughline®, GIB
Braceline®, GIB Noiseline®, GIB Aqualine®, GIB Fyrelane®

Revised 10/06/2011

SECTION 1: IDENTIFICATION OF THE SUBSTANCE OR MIXTURE AND OF THE SUPPLIER

Product name: GIB® Plasterboard range – including GIB® Standard, GIB Wideline®, GIB Ultraline®, GIB Ultraline® Plus, GIB Toughline®, GIB Braceline®, GIB Noiseline®, GIB Aqualine®, GIB Fyrelane®

Recommended use: Interior wall lining

Company Winstone Wallboards

Address: P.O. Box 12 256
Penrose 1642, Auckland, NEW ZEALAND

Telephone Number: 09 633 0100

Emergency Contact Number: 0800 POISON (0800 764 166)
or for Emergency Services dial 111

Date of preparation: 12th January 2010

SECTION 2: HAZARDS IDENTIFICATION

Hazard Classification: Non hazardous

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

Ingredients composition:

CHEMICAL NAME:	SYNONYMS:	PROPORTION:	CAS NUMBER:
Gypsum		>70	13397-24-5
Inert filler		<25	
Paper (Cellulose Fibre)		<15	9004-34-6
Starch		<3	9005-25-8
May Contain The Following:			
Vermiculite		>4	1318-00-9
Paraffin Wax		>2	8002-74-2
Siloxane		<2	63148-57-2
Glass Fibre		<1	65977-17-3
Boric Acid		<0.5	10043-35-3
Crystalline Silica		<0.2	14808-60-7



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Braceline®, GIB Noiseline®, GIB Aqualine®, GIB Fyrelite®

Revised 10/06/2011

SECTION 4: FIRST AID MEASURES

Ingestion:	No harmful effects expected. No specific recommendation. If gastric disturbance occurs, call doctor.
Eyes:	Immediately flush thoroughly with water for 15 minutes to remove particles. If irritation persists, see doctor.
Skin:	Rinse with water, then wash with mild soap and water. A commercially available hand lotion may be used to treat dry skin areas. If skin has become cracked, take appropriate action to prevent infection and promote healing. If irritation persists, please contact doctor.
Inhalation:	Remove to fresh air. Leave the area of dust exposure and remain away until coughing and other symptoms subside. Other measures are usually not necessary, however if conditions warrant, contact doctor.

SECTION 5: FIRE FIGHTING MEASURES

Flammability:

These products are nominally fire resistant and have the following surface burning characteristics as reported nationally recognised laboratories.

Flame Spread:	0	(AS1530.3 - Part 3 - 1989)
Smoke Developed:	5	(AS1530.3 - Part 3 - 1989)
Suitable extinguishing media:	Use extinguishing media appropriate for surrounding fire	
Hazards from combustion:	Non combustible	
Protective precautions and equipment for fire fighters:	Normal precautions and protection apply	
HAZCHEM Code:	Not applicable	

SECTION 6: ACCIDENTAL RELEASE MEASURES

Emergency Procedures:	No special precautions
------------------------------	------------------------

SECTION 7: HANDLING AND STORAGE

Handling:	Must be stacked FLAT to avoid serious injury. Follow normal good manual handling techniques when handling GIB® board, including evaluating the lift, your ability and capacity to lift, and any obstructions or hazardous conditions present in the area.
Storage:	Store in a dry place. Store all GIB® plasterboard flat. Panels are heavy and can fall over, causing serious injury or death
Incompatibilities:	Loses strength if put into a wet state.



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Revised 10/06/2011

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

Workplace Exposure Standards: N/A
Engineering Controls: N/A

PERSONAL PROTECTION

Skin Protection: Gloves or protective clothing are usually not necessary but may be desirable in specific work conditions. Wear eye protection (safety glasses or goggles) to avoid particulate irritation of the eye.

Eye & Respiratory Protection: Not typically required under normal conditions of use. Avoid inhalation of dust. Nuisance dust created from product may cause eye, skin, nose, throat or upper respiratory irritation. Provide general ventilation and, if required, local exhaust ventilation to meet TLV requirements. Wear a NIOSH/MSHA-approved respirator if TLV exceeded and/or when dusty conditions exist to guard against nuisance particles.

General ventilation should be adequate but if necessary use local exhaust ventilation to keep exposures below TLV.

Inspirable nuisance dust depends upon cutting method. Zero will be present if score and snap but other cutting methods may generate dust..

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Paper covered board with white core.
Odour:	Low order
pH, at stated concentration:	neutral
Vapour Pressure:	NA
Vapour Density:	NA
Boiling Point/Range (°C):	NA
Freezing/Melting Point (°C):	NA
Solubility in water:	Looses strength when wet
Specific Gravity (H₂O = 1):	NA
FLAMMABILITY:	NA
ADDITIONAL PROPERTIES	
Evaporation Rate:	NA
% Volatiles:	NA
Volatile Organic	
Compounds Content:	NA

SECTION 10: STABILITY AND REACTIVITY

Chemical Stability:	Stable
Hazardous Decomposition:	NA
Conditions to avoid:	NA
Hazardous polymerization:	NA

SECTION 11: TOXICOLOGICAL INFORMATION

Health Effects: Acute No harmful effects expected if swallowed. No specific recommendation.



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Revised 10/06/2011

(short term) If gastric disturbance occurs, call doctor.

Skin: Rinse with water, then wash with mild soap and water. A commercially available hand lotion may be used to treat dry skin areas. If skin has become cracked, take appropriate action to prevent infection and promote healing. If irritation persists, contact doctor.

The following could occur only if dust is generated:

Health Effects: Chronic (long term) The following medical conditions maybe aggravated: Pre-existing upper respiratory and lung diseases such as, but not limited to, bronchitis, emphysema and asthma.

SECTION 12: ECOLOGICAL & INFORMATION

Eco-toxicity: Zero
Mobility: NA

Persistence and Degradability: Paper Biodegradable Gypsum core itself is stable except with water and organic material if in anaerobic conditions and if anaerobic bacteria are present

SECTION 13: DISPOSAL CONSIDERATIONS

Disposal Information: Preferable as compost additive or fertiliser, otherwise to landfill

SECTION 14: TRANSPORT INFORMATION

DG Class: N/A
Subsidiary Risk 1: N/A
Packaging Group: N/A
HAZCHEM code: N/A
Marine Pollutant: N/A

Special Precautions for User: Following good safety practise. Ensure loads are tied down securely and keep dry. When carrying sheets follow good practise and use the appropriate safety equipment.

SECTION 15: REGULATORY INFORMATION

N/A

SECTION 16: OTHER INFORMATION

- END OF SDS -