



## BRANZ Appraised

Appraisal No. 949 [2023]

## STRATOCELL® WHISPER™ FR SOUND ABSORBING FOAM

Appraisal No. 949 [2023]

This Appraisal replaces BRANZ  
Appraisal No. 949 [2017]



### BRANZ Appraisals

Technical Assessments of  
products for building and  
construction.



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## Product

- 1.1 Stratocell® Whisper™ FR is a perforated closed cell laminated polyethylene foam sheet for use as an acoustic sound absorbing overlay to interior walls and ceilings, and/or as a hanging baffle in interior spaces.

## Scope

- 2.1 Stratocell® Whisper™ FR has been appraised for use as an acoustic surface overlay for internal walls and ceilings, and as a hanging baffle in interior spaces.

## Building Regulations

### New Zealand Building Code (NZBC)

- 3.1 In the opinion of BRANZ, Stratocell® Whisper™ FR sound absorbing foam, 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 B1 STRUCTURE:** Performance B1.3.1, B1.3.2 and B1.3.4. Stratocell® Whisper™ FR meets the requirements for loads arising from self-weight and impact [i.e. B1.3.3 (a) and (j)]. See Paragraphs 8.1-8.3.

**Clause B2 DURABILITY:** Performance B2.3.1 (b) 15 years and B2.3.1 (c) 5 years. Stratocell® Whisper™ FR meets these requirements. See Paragraph 9.1.

**Clause C3 FIRE AFFECTING AREAS BEYOND THE FIRE SOURCE:** Performance C3.4 (a). Stratocell® Whisper™ FR has a material Group Number of 1-S. See Paragraph 12.1.

**Clause F2 HAZARDOUS BUILDING MATERIALS:** Performance F2.3.1. Stratocell® Whisper™ FR meets this requirement.



## Technical Specification

### Description

- 4.1 Stratocell® Whisper™ FR is a closed cell laminated polyethylene foam which has cells that are subsequently opened through the manufacturing process, resulting in a sound absorbent material.
- 4.2 Stratocell® Whisper™ FR sheets measure a nominal 1,200 x 2,400 mm and are available in thicknesses ranging from 20 mm to 60 mm. Common variants in the New Zealand market are 25 mm and 50 mm. The density of the foam material is 25 kg/m<sup>3</sup>.
- 4.3 Stratocell® Whisper™ FR sheets are white, grey or black in colour and are packaged in clear polyethylene wrap.

### Accessories

- **Double Sided Whisper Tape:** cross-linked polyethylene foam carrier with acrylic adhesive on both faces.
- 4.4 Accessories used with Stratocell® Whisper™ FR, which are supplied by the installer, are mechanical fasteners or adhesives.

## Handling and Storage

- 5.1 Stratocell® Whisper™ FR must be stored horizontally, indoors, in a well ventilated area, away from direct sunlight, and in dry conditions.

## Technical Literature

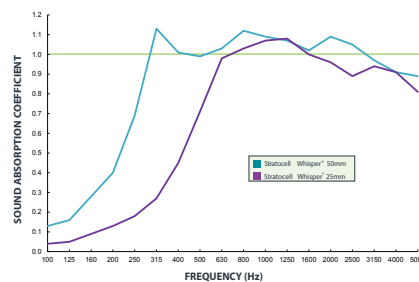
- 6.1 This Appraisal must be read in conjunction with:
  - Guide to Fixing and Installing Stratocell® Whisper™, August 2020.
  - Whisper™ Product Specification Sheet [TDS and Tolerance Sheet].
  - How to Install Whisper™ Using Danco® Double Sided Whisper Tape.
- 6.2 All aspects of design, use, installation and maintenance contained in the Technical Literature and within the scope of this Appraisal must be followed.

## Design Information

### General

- 7.1 Stratocell® Whisper™ FR sheets are laminated polyethylene foam sheets for use as acoustic sound absorbing overlay sheets to interior walls and ceilings, or as hanging baffles. Stratocell® Whisper™ FR can be used to control problems with noise and sound in many internal environments by absorbing noise and minimising reverberation to improve the acoustic characteristics of the space. The graph below shows the Stratocell® Whisper™ FR 25 mm and 50 mm acoustic performance when tested to ISO 354: 2003 [Graph 1]. Refer to Sealed Air [New Zealand] for specific design requirements.

**Graph 1: Reverberation room testing to ISO 354:2003**



- 7.2 Stratocell® Whisper™ FR is not a vapour barrier. Designers will need to consider the need for vapour control for the supporting walls or ceiling behind the acoustic foam overlay.

## Structure

- 8.1 Stratocell® Whisper™ FR sheets have a mass of 1.25 kg/m<sup>2</sup> for the 50 mm thick sheet and 0.625 kg/m<sup>2</sup> for the 25 mm thick sheet. Sheets have a nominal density of 25 kg/m<sup>3</sup>.
- 8.2 In ceiling applications, and where the substrate integrity is unknown, specific engineering design should be carried out for fixing Stratocell® Whisper™ FR sheets.
- 8.3 Stratocell® Whisper™ FR surface is resistant to impact damage. The substrate behind provides the large impact support. Stratocell® Whisper™ FR surface can be damaged by sharp objects.

## Durability

### Serviceable Life

- 9.1 If properly maintained, Stratocell® Whisper™ FR will remain serviceable for at least 25 years provided it is maintained and not exposed to direct ultraviolet (UV) light.

## Maintenance

- 10.1 Yearly inspection and repair of defects if found is required. Cleaning is undertaken with mild detergent solution followed by rinsing and blotting. Refer to the Technical Literature for information on cleaning.

## Prevention of Fire Occurring

- 11.1 Separation or protection must be provided to Stratocell® Whisper™ FR from heat sources such as fireplaces, heating appliances and chimneys. Part 7 of NZBC Verification Method C/VM1 and Acceptable Solution C/AS1, and NZBC Acceptable Solution C/AS2 provide methods for separation and protection of combustible materials from heat sources.
- 11.2 Particular consideration shall be taken around luminaires. Separation or protection requirements of the luminaire from the manufacturer must be followed.

## Fire Affecting Areas Beyond the Fire Source

### Control of Internal Fire and Smoke Spread

- 12.1 Stratocell® Whisper™ FR has been tested in accordance with ISO 9705 and achieved a Group Number of 1-S. Refer to Table 4.1 of NZBC Acceptable Solution C/AS2 to determine where Stratocell® Whisper™ FR may be used according to its Group Number. No applied finishes are to be used over Stratocell® Whisper™ FR. There are no internal surface finish requirements for Stratocell® Whisper™ FR sheets when they are used in buildings with a SH Risk Group classification.

## Installation Information

### Installation Skill Level Requirement

- 13.1 All design and building work must be carried out in accordance with Stratocell® Whisper™ FR Technical Literature and this Appraisal. All building work must be undertaken by competent and experienced tradespersons conversant with Stratocell® Whisper™ FR.

## General

- 14.1 Installation of Stratocell® Whisper™ FR must be in accordance with the Technical Literature and this Appraisal.
- 14.2 Stratocell® Whisper™ FR can be installed with Double Sided Whisper Tape. The tape is applied to the smooth side of the sheets, 20 mm from the edge and an additional strip along the middle of the long run of the sheet. Additional mechanical fastening is recommended in addition to the tape on ceiling installations.



- 14.3 Stratocell® Whisper™ FR can also be installed with suitable mechanical fasteners or adhesives. For hanging sheets, corkscrew fittings can be used. A minimum of 35 mm penetration into a 50 mm sheet is recommended.
- 14.4 Sheets should be butt jointed to cover the desired surface area. A minimum of eleven fasteners per sheet should be applied or four fixings per m<sup>2</sup>. These should be installed no less than 50 mm and no more than 150 mm from the edge of the sheet and evenly distributed over the area of the sheet.

### Health and Safety

- 15.1 Refer to the Technical Literature for guidance on health and safety requirements.

## Basis of Appraisal

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

### Tests

- 16.1 Tests have been carried out in accordance with ISO 9705. Stratocell® Whisper™ FR achieved a Group Number of 1-S.

### Other Investigations

- 17.1 An assessment of the durability of Stratocell® Whisper™ FR has been made by BRANZ technical experts.
- 17.2 Stratocell® Whisper™ FR was tested to ISO 354: 2003 by Istituto Giordano, Bellaria-Igea, Italy to determine its acoustic performance.
- 17.3 Stratocell® Whisper™ FR was tested to ISO 717-1: 2007 by Istituto Giordano, Bellaria-Igea, Italy to determine its acoustic performance.
- 17.4 Stratocell® Whisper™ FR was tested to AFNOR NF EN ISO 1600-9: 2011-321 by LAPI - Laboratorio Prevenzione Incendi S.p.A, Italy, to determine its Volatile Organic Compound Emissions.
- 17.5 Stratocell® Whisper™ FR was tested to ASTM C1338: 2008 by Intertek Columbus, Ohio to determine its fungi resistance.

### Quality

- 18.1 The manufacture of Stratocell® Whisper™ FR has not been examined by BRANZ. Details regarding the quality and composition of the materials used were obtained by BRANZ and found to be satisfactory. BRANZ undertakes an ongoing review of product quality on an inwards goods basis.
- 18.2 Quality of materials, components and accessories supplied by Sealed Air [New Zealand] is the responsibility of Sealed Air [New Zealand].
- 18.3 The quality of installation on site of components and accessories supplied by Sealed Air [New Zealand] is the responsibility of the installer.

## Sources of Information

- ISO 354:2003 Acoustic - Measurement of sound absorption in a reverberation room.
- ISO 9705:2003 Fire tests - Full-scale room test for surface products.
- Ministry of Business, Innovation and Employment Record of amendments - Acceptable Solutions, Verification Methods and handbooks.
- The Building Regulations 1992.



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07 December 2023

STRATOCELL® WHISPER™ FR  
SOUND ABSORBING FOAM



In the opinion of BRANZ, **Stratocell® Whisper™ FR Sound Absorbing Foam** 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 **Sealed Air [New Zealand]**, 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. **Sealed Air [New Zealand]**:
  - 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 **Sealed Air [New Zealand]**.
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 **Sealed Air [New Zealand]** or any third party.

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**For BRANZ**

**Claire Falck**

Chief Executive

Date of Issue:

07 December 2023