



BRANZ Appraised
Appraisal No. 1088 [2019]

ALLPROOF PASSIVE FIRE PROTECTION PRODUCTS

Appraisal No. 1088 [2019]

Amended 19 February 2024



BRANZ Appraisals

Technical Assessments of
products for building and
construction.



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Product

- 1.1 The Allproof range of passive fire protection products include;
 - Low profile fire collars
 - Cast in fire collars
 - Drop in fire collars
 - Pipe wraps
- 1.2 The Allproof Passive Fire Protection Products are labelled with, or include, Allproof Industries label in the packaging for simple site identification and recording of installation details.
- 1.2 The Allproof Passive Fire Protection Products, as described above, are designed to contain a fire in the compartment of origin, limiting the spread of fire and smoke for a specified period of time.

Scope

- 2.1 The Allproof Passive Fire Protection Products are for use around penetrations in fire rated walls and floors for sealing around a range of plastic pipes, electrical or communication cabling to achieve the required fire resistance rating [FRR].
- 2.2 Allproof Passive Fire Protection Products are suitable for use through pre-pour and post-pour concrete floors, concrete and plasterboard walls. Various FRRs are achievable through the use of different products. The FRR of the penetration is required to match that of the fire rated wall or floor.

Building Regulations

New Zealand Building Code (NZBC)

- 3.1 In the opinion of BRANZ, Allproof Passive Fire Protection Products, if designed, installed, used 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. Allproof Passive Fire Protection Products meet these requirements. See Paragraph 8.1.

Clause C3 FIRE AFFECTING AREAS BEYOND THE FIRE SOURCE: Performance C3.1, C3.2 and C3.3. Allproof Passive Fire Protection Products will contribute to meeting this requirement. See Paragraph 11.1.

Clause F2 HAZARDOUS BUILDING MATERIALS: Performance F2.3.1. Allproof Passive Fire Protection Products meet this requirement.

Technical Specification

- 4.1 **Allproof Low Profile Pipe Collars** consist of intumescent material encased in a stainless steel or galvanised steel surround with fixing tabs. They are designed to be installed in fire rated concrete floors or walls, and masonry or plasterboard fire rated walls. The intumescent allows Allproof to achieve a low profile height of 27 mm for the 25-80 mm pipe collars.
- 4.2 **Allproof Cast In Collars** are made from recycled polypropylene with intumescent material and a galvanised steel band for use in concrete floors. They reduce the labour content required for installation of passive fire rated pipe penetrations on insitu concrete floors. They are 250 mm overall in height and have multiple fixing positions.
- 4.3 **Allproof Drop In Collars** are made from galvanised steel and installed in conjunction with intumescent sealant. They provide a passive fire rating option for thin concrete or composite concrete floors. Drop in collars can be installed and fixed from the top side of the slab and can be retrofitted around pipes.
- 4.4 **Allproof Pipe Wraps** consist of a layer or multiple layers of intumescent sealant in a polythene sleeve. The sleeve features a strip of double sided tape. Pipe wraps are to be installed in solid construction walls and floors.
- 4.5 Allproof Collars and Wraps covered by this Appraisal are for use on a range of plastic pipes, electrical or communication cabling and are available in sizes ranging from 32-150 mm.

Handling and Storage

- 5.1 The Allproof Passive Fire Protection Products must be stored in a clean and dry location in their original packaging prior to installation.

Technical Literature

- 6.1 This Appraisal must be read in conjunction with:
 - Passive Fire Protection Systems - Electrical - March 2023
 - Passive Fire Protection Systems - Plumbing - November 2023
- 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

- 7.1 An assessment of the Allproof Passive Fire Protection Products has been carried out by BRANZ based on fire testing. The resulting FRRs of each product with floor and wall systems has been provided in the Allproof Passive Fire Protection Products Technical Literature detailed in Paragraph 6.1.

Durability

- 8.1 Allproof Passive Fire Protection Products meet code compliance with the NZBC Clause B2.3.1 [b] 15 years provided that they are used in closed, internal spaces, protected from excessive moisture, solvents, oxidising agents, acids and alkalis. They should not be exposed to ultraviolet [UV] light in service.

Maintenance

- 9.1 Allproof Passive Fire Protection Products will not normally require maintenance. However, if damage occurs to the installation, repairs or replacement of the sleeve must be carried out to ensure the integrity of the fire rated system.
- 9.2 Regular inspection of fire rated systems incorporating Allproof Passive Fire Protection Products must be undertaken. If deterioration of the system is identified, then repair or replacement must be undertaken to ensure that the required FRR is maintained.



Prevention of Fire Occurring

- 10.1 Separation or protection must be provided to Allproof Passive Fire Protection Products from heat sources such as fireplaces, heating appliances and chimneys. Part 7 of NZBC Acceptable Solution C/AS1 and NZBC Acceptable C/AS2 provide methods for separation and protection of combustible materials from heat sources.

Fire Affecting Areas Beyond the Fire Source

- 11.1 The Technical Literature gives the FRRs for the Allproof Passive Fire Protection Products that are able to be achieved to provide the FRR's as determined by NZBC Acceptable Solutions C/AS1, C/AS2 and NZBC Verification Method C/VM2.
- 11.2 Allproof Passive Fire Protection Products provide varying FRR's ranging from -/30/30 and -/240/240. Refer to Technical Literature for differing product specifications.

Structural Stability

- 12.1 In order to satisfy the requirements of NZBC C6 Structural Stability, designers must ensure that fire rated elements are supported by building elements having at least the same FRR as the fire rated element they are supporting.

Airbourne and Impact Sound

- 13.1 There is no noise attenuation information given for Allproof Passive Fire Protection Products, and this must be considered by designers.

Installation

Installation Skill Level Requirement

- 14.1 Installation of Allproof Passive Fire Protection Products must be carried out by contractors experienced in the principles of fire rated construction.

Low Profile Collar

- Ensure substrate around pipe is flat and free from obstructions.
- Open pipe collar and position around pipe.
- Slide tab through slot in pipe collar and fold back 180°.
- Secure pipe collar by using suitable fixings as per testing. Do not use fixings which rely on plastic or nylon components for grip.
- Install only from underside on floor penetrations. Install pipe collar on both sides for wall penetrations.
- Allproof Industries NZ Limited recommends any thermal or acoustic lagging maintains a 50 mm separation to the fire collar.

Cast In Fire Collars

- Fix to formwork in correct location.
- Pour concrete floor.
- Remove formwork ensuring galvanised steel ring is exposed.
- Cut plastic collar to desired height.
- Install pipework.
- Seal gap between pipe and collar on top side of floor with intumescent sealant.
- Allproof Industries NZ Limited recommends any thermal or acoustic lagging maintains a 50 mm separation to the fire collar.



Drop In Fire Collars

- Core drill hole to specified diameter to suit pipe size.
- Install drop in fire collar fixing with two metal pin anchors. (Floor waste installs, require the tabs to be recessed into the slab.)
- Ensure collar on underside of slab is exposed no greater than 80 mm and recessed in slab no more than 5 mm.
- Insert pipework through collar.
- Seal gaps between concrete/collar and collar/pipe with a minimum 5 mm depth of Allproof MAS310 or Bostik Fireban One Intumescent sealant.
- Allproof Industries NZ Limited recommends any thermal or acoustic lagging maintains a 50 mm separation to the fire collar.

Pipe Wraps

- Core drill hole to specified diameter to suit pipe size.
- Position fire wrap around circumference of pipe and remove backing from the self adhesive strip and join ends together.
- Slide wrap into position ensuring wrap is located entirely within depth of the wall or floor. For floor applications, the wrap should be flush with the underside of the floor. For wall applications, two wraps are required - one from under each side; each wrap should be flush with the outside wall.
- If there is space between the concrete and the outer side of the wrap and above the wrap, backfill the space with mortar.
- The polyethylene sleeve can be removed and intumescent strip taped in place if the core hole is very tight.

Basis of Appraisal

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

Tests

- 15.1 Testing to determine to FRR of a range of wall and floor/ceiling systems and penetrations in accordance with AS 1530.4 by BRANZ and other accredited fire test laboratories have been carried out.

Investigations

- 15.2 Assessment of fire tests of the Allproof Passive Fire Protection Products were carried out.
- 15.3 An assessment was made on the durability of the Allproof Passive Fire Protection Products by BRANZ technical experts and found to be satisfactory.
- 15.4 Site visits were carried out by BRANZ to assess the practicability of the installation of the Allproof Passive Fire Protection Products, and to view completed installations.

Quality

- 15.5 The manufacture of the Allproof Passive Fire Protection Products has been examined by BRANZ, and details regarding the quality and composition of the materials used were obtained by BRANZ and found to be satisfactory.
- 15.2 The quality of the Allproof Passive Fire Protection Products supplied is the responsibility of Allproof Industries NZ Limited.
- 15.3 Designers are responsible for the design of buildings incorporating Allproof Passive Fire Protection Products and fire rated systems.
- 15.4 Building contractors are responsible for the quality of construction incorporating Allproof Passive Fire Protection Products.
- 15.5 Building owners are responsible for the maintenance of Allproof Passive Fire Protection Products installation during their service life.



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Sources of Information

- AS 1530.4 Fire-resistance tests of elements of building construction.
- Ministry of Business, Innovation and Employment Record of amendments - Acceptable Solutions, Verification Methods and handbooks.
- Building Regulations 1992

Amendments

Amendment No 1, dated 07 October 2021

This Appraisal has been amended to update the NZBC References.

Amendment No 2, dated 19 February 2024

This Appraisal has been amended to update the Technical Literature references.



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In the opinion of BRANZ, **Allproof Passive Fire Protection Products** are 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 **Allproof Industries NZ Limited**, 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. **Allproof Industries NZ Limited:**
 - 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 **Allproof Industries NZ Limited**
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 **Allproof Industries NZ Limited** or any third party.

For BRANZ

Chelydra Percy

Chief Executive

Date of Issue:

12 November 2019