



THE UNIVERSITY OF
AUCKLAND
Te Whare Wānanga o Tāmaki Makaurau
NEW ZEALAND

Property Services Design Standards and Guidelines

Section **10-2**

10-2 Passive Fire Guide, Product Selection

Version 1.0



Document Control Information

Team Name:	Design Standards Steering Group	Published date:	20 January 2020
Document version:	Version 1.0	Revision date:	Annually

Document Control

Version	Review Date	Authorised by	Description
1.0	20 January 2020	Design Standards Steering Group	Initial version of manual.
			(Either note which sections have changed or 'annual review – no changes')

Feedback

If you spot an error in this document, or you have a suggestion on how we can improve the document, please tell us about it by printing, completing and emailing the form in Appendix A to us at PTechServices@auckland.ac.nz.

10-2 Passive Fire Guide, Product Selection

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10-2.1 Introduction

Introduction

This section shall be specifically read in conjunction with *Section 1 About this Document* and *Section 2 Project and Building Works Requirements* of the University of Auckland (the University) Property Services Design Standards and Guidelines.

10-2.1.1 About this document

The University's Passive Fire guide outlines the requirements when undertaking fire and smoke stopping within any building at the University. It is made up of 3 parts:

Table 1: Passive fire guide documents

Name	Description
Part 1, General	Focuses on defining the performance requirements for the systems, the fire stopping documentation package and other general requirements.
Part 2, Product Selection	Provides, for information only, details on a significant number of fire stopping products from various manufacturers / suppliers / importers which manufacturers attest to achieving compliance with NZ Building Code requirements (AS4072 Part 1).
Part 3, Basic Solutions.	Provides, for information only, several documented solutions for frequently occurring fire stopping situations. This information is intended to minimise the design effort required to ascertain the suitability of the solution and to minimise the risk of installation errors.

10-2.1.2 Purpose

The purpose of this section is to provide, for information only, a number of fire stopping products from various manufacturers / suppliers / importers which are claimed to comply with NZBC requirements and therefore suitable for use at the University.

All product information detailed within this guide is provided for information only. Given normal product development cycles, it is possible that products identified within the guide will be superseded, withdrawn or redesigned. The fire stopping contractor shall be responsible for checking the product information is current and correct.

"Passive Fire" relates to maintaining the fire resistance rating of a fire separation and / or the integrity of a smoke separation. This guide frequently uses 'fire stopping' and 'smoke stopping' to denote this. For simplicity, this guide frequently refers to fire stopping and smoke stopping as 'fire stopping'.

10-2.1.3 Applicable standards

This table lists the standards that are applicable to Passive Fire Guide, Product Selection.

Note: The list is not exhaustive and if superseded by other standard(s), the latest version and/or amendment applies.

Table 2: Passive Fire Guide, Product Selection Standards

Standard	No	Title
AS	4072 Part 1	Components for the protection of openings in fire-resistant separating elements. Part 1: Service penetrations and control joints.
AS	1530, Part 4	Methods for fire tests on building materials, components and structures. Part 4: Fire-resistance test of elements of construction
NZS BS	476 Part 21	Fire tests on building materials and structures. Methods for determination of the fire resistance of loadbearing elements of construction
NZS BS	476, Part 22	Fire tests on building materials and structures. Methods for determination of the fire resistance of non-Smoke and loadbearing elements of construction
NZS	4520 (2010)	Fire resisting doorsets
BS/EN	12101, Part 1	Smoke and heat control systems, Specifications for smoke barriers
EN	1634 Part 3	Fire resistance and smoke control tests for door and shutter assemblies, openable windows and elements of building hardware, Part 3 – Smoke control test for door and shutter assemblies
AC	1825	Auckland Council statement for acceptance of firestopping
UL	1479	Standard for Fire Tests of Penetration Firestops.
ETAG	026 Part1_2012	Fire Stopping Guide – General and “Hilti” Firestop Systems Ageing Resistance

10-2.2 Abbreviations

Passive Fire Guide, Product Selection abbreviations

Table 3: Passive Fire Guide, Product Selection abbreviations

Abbreviation	Description
AC	Auckland Council
BCA	Building Consent Authorities
BWoF	Building Warrant of Fitness
EJ	Engineer's Judgement
FRR	Fire resistance rating
ICT	Information and Communications Technology
ICT	Information and Communication Technology Includes server and communications rooms
ISO	International Organisation for Standardisation
NZBC	New Zealand Building Code
TA	Territorial Authority
UL	Underwriters Laboratories
Primary element	A building element providing the basic loadbearing capacity to the structure, and which if affected by fire may initiate instability or premature structural collapse.
Secondary element	A building element not providing load bearing capacity to the structure and if affected by fire, instability or collapse of the building structure will not occur.
Fire separation	Any building element which separates firecells or firecells and safe paths and provides a specific fire resistance rating (FRR). Note: The FRR relates to a standard test which established criteria for structural adequacy, fire integrity and fire insulation.
Fire-rated floor infills	<ul style="list-style-type: none"> Minimum 1.5 kPa live load capacity to enable maintenance access to the services and/or their respective fire stops. Maximum 100mm clearance between the service penetrating the fire separation and the load-carrying fire-rated infill. (Clearance to be filled by non-load carrying fire stopping.)
Fire resisting closure	A fire rated device or assembly for closing an opening through a fire separation.
Sleeping risk spaces	<ul style="list-style-type: none"> Includes bedrooms in a hall of residence, dormitories, hospital ward bedrooms, and clinical treatment spaces using sedation. Does not include bedrooms in a domestic dwelling owned by the University.
Smoke separation	Any building element able to prevent the passage of smoke between two spaces

10-2.3 Summary of Solutions - Smoke Stopping Sealants

10-2.3.1 Objectives

The objective of smoke stopping is to reduce the life safety or property protection risks as a result of smoke spread through openings in building elements. As detailed in the University's Campus Passive Fire Guide, Part 1 - General, the University requires smoke stopping to these spaces:

- Sleeping risk spaces, where required by the NZBC to be enclosed in fire separations
- Designated ICT risk spaces

For small openings, adequate smoke stopping may only require the application of a sealant.

For larger openings, applying only a sealant may not be suitable and a rigid or flexible smoke stopping material may be required (see application example below).

Due to the delayed activation (closure) of building elements with fusible links, these features are to be activated using motorised interfaced with the fire alarm system so that the smoke performance is achieved immediately once smoke is detected (e.g. motorised smoke dampers).

10-2.3.2 University of Auckland's Performance Requirements

The University's performance requirements for smoke stopping are:

- The smoke stopping material(s) is to be practically impermeable to smoke
- The resistance to smoke permeability shall be maintained up to 200°C
- The smoke stopping material(s) is to be applied to fully seal the opening in the building element (substrate). This may require permanent mechanical fixing to the substrate.
- Where a sealant is used, the depth of sealant is to be at least equal to the thickness of the building element (e.g. for glazing) or 10mm, whichever is the smaller amount.

10-2.3.3 Smoke stopping sealants

Table 4 identifies the suitable smoke stopping products for use within University campus buildings where only sealants are required. Comparable products are also likely to be acceptable.

Table 4: Smoke stopping sealants

Supplier	Product
Hilti	CP606
3M	IC-15WB+ Sealant
3M	CP-25WB Sealant
CSD	CSD-RISE FIWA Putty/Sealant
Firetherm	Intumastic Sealant Intusil Sealant
Firepro	M706 Sealant M707 Sealant

Supplier	Product
Promat	Promaseal AN Sealant

For additional information about these products, refer to the manufacturer.

10-2.3.3.1. Examples

Examples of possible smoke stopping solutions are:

- For Ø30mm metal pipe passing through a Ø45mm hole in a concrete wall. This opening could be smoke stopped using a fire sealant (e.g. Hilti CP606) applied to the annular gap with at least a 10mm depth.
- For Ø30mm metal pipe passing through a Ø100mm hole in a concrete wall. This opening could be patched using a plasterboard sheet and any annular gap would be smoke stopped using a fire sealant (e.g. Hilti CP606) applied with at least a 10mm depth.
- For Ø30mm metal pipe passing through a Ø45mm hole in a 6mm glass wall. This opening could be smoke stopped using a fire sealant (e.g. Hilti CP606) applied to the annular gap with at least a 6mm depth.

10-2.4 Summary of Solutions – Fire stopping

10-2.4.1 Introduction

The NZBC and the University of Auckland require the continuity and effectiveness of fire separations (the substrate) shall be maintained around penetrations, and in gaps between or within building elements, using fire stops.

10-2.4.2 Testing fire stops

Fire stops shall be tested:

- In circumstances representative of their use in service, paying due regard to the size of expected gaps to be fire stopped, and the nature of the fire separation within which they are to be used, and
- In accordance with AS 4072: Components for the protection of openings in fire resistant separating elements – Part 1: Service penetrations and control joints.

10-2.4.3 Fire stop performance

Fire stops in sprinklered buildings require the following performance:

- Integrity rated only (no insulation or structural adequacy requirements)

Fire stops in buildings with no sprinklers require this performance:

- Integrity and insulation rated (no structural adequacy requirement)
- No insulation rating is required where it can be shown that there will be no combustible materials placed within 300mm of the penetration and fire stop or the fire damper and air duct.

The fire stopping of fire separations relates to all new gaps and penetrations and on 'reasonably practicable' grounds, all existing gaps and penetrations either:

- Exposed as part of these works, or
- Local to the new work where they fail to meet the fire performance of the substrate.

It may be necessary for the project fire engineer to provide specific detail as to the extent of remediation work to existing gaps and penetrations (especially when the building has no suspended ceiling).

10-2.4.4 Plasterboard

Many suppliers of fire stopping products rely on local or overseas fire tests which have been carried out on gypsum plasterboard assemblies with significantly greater fire resistance than may be found onsite. It is noted from the information provided that there are few fire stopping solutions for single plasterboard linings. Local patching of the wall (see adjacent image) may therefore be required. See the relevant page from the Gib Fire Rated Systems guide (available on the GIB website) for further details.

As stated in the PLASTERBOARD Fire Rated Systems guide, fire stops are not to be supported directly by the plasterboard lining. Unless specified by the fire stopping manufacturer, the fire stop will need to be fixed to wall framing. Heavy items such as cable trays are not to be supported by the plasterboard lining.

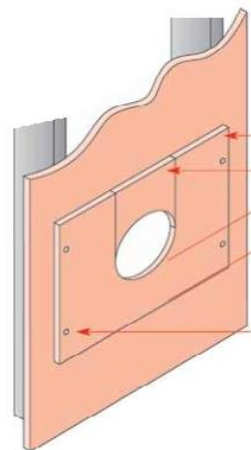


Figure 1: Suggested GIB patching detail

10-2.4.5 About fire stopping product tables

In the following tables, fire ratings (FRR) are specified in a form comprising three values (e.g. 60/60/60) for stability, integrity and insulation respectively. The number (denoted below in red font) relates to the performance in minutes.

Do not mix-and-match passive fire products from different manufactures unless specifically stated to be part of the test and approved solution.

10-2.4.6 CSD Products

Table 5: CSD products

CSD Product	Comments	Fire Rating
Actifoam / Noforno / RISE / RISE Ultra / Slipsil plug	≥150mm concrete walls, cables, combustible and non-combustible pipes	[-/120/60 to -/120/120]
	plasterboard walls (≥32mm lining both sides), cables, combustible pipes	[-/120/120]

10-2.4.7 Sika Products

Table 6: Sika products

Sika Product	Comments	Fire Rating
Sika Boom	≥200mm concrete walls, blank seals	[-/120/120 to -/240/240]
Sika Firerate	≥120mm concrete floors, blank seal	[-/240/60 to -/240/240]
	≥120mm concrete and masonry walls, blank seals	[-/120/120 to -/240/240]

10-2.4.8 3M Products

Table 7: 3M products

3M Product	Comments	Fire Rating
CP 15WB+ Sealant	≥120mm concrete floors, blank seal, cables	[-/120/30 to -/180/180]
	plasterboard walls (≥26mm lining both sides), blank seal, cables, copper pipe, steel pipe	[-/120/- to -/120/120]
	≥116mm masonry walls, blank seal, cables, copper pipe, steel pipe	[-/120/30 to -/240/240]
CP 25WB+ Sealant	≥120mm concrete floors, blank seal, cables	[-/120/30 to -/180/180]
	plasterboard walls (≥26mm lining both sides), blank seal, cables, copper pipe, steel pipe	[-/120/- to -/120/120]
	≥116mm masonry walls, blank seal, cables, copper pipe, steel pipe	[-/120/30 to -/240/240]
CS-195+ Composite Sheet	≥120mm concrete floors, blank seal, cables, copper pipe, steel pipe	[-/180/30 to -/240/120]
	plasterboard walls (≥26mm lining both sides), blank seal, cables, copper pipe, steel pipe	[-/120/- to -/120/30]
	≥116mm masonry walls, blank seal, cables, copper pipe, steel pipe	[-/180/- to -/240/90]
Fire Barrier Mortar	≥120mm concrete floors, blank seal, cables, copper pipe, brass pipe, steel pipe	[-/90/- to -/180/180]
	≥116mm masonry walls, blank seal, cables, copper pipe, steel pipe	[-/90/- to -/180/180]

3M Product	Comments	Fire Rating
Fire Barrier Pillows	≥120mm concrete floors, blank seal, cables, copper pipe, steel pipe	[-/120/30 to -/180/30]
	≥116mm masonry walls, blank seal, cables, copper pipe, steel pipe	[-/120/30 to -/120/30]
Pass-through Device	≥120mm concrete floors, blank seal, cables	[-/120/- to -/240/-]
	plasterboard walls (26mm lining both sides), blank seal, cables	[-/120/- to -/120/30]
Mouldable Putty MP+ Stix and Pads	≥120mm concrete floors, blank seal, cables	[-/180/- to -/240/120]
	plasterboard walls (26mm lining both sides), blank seal, cables	[-/120/30 to -/120/120]
	≥116mm masonry walls, blank seal, cables	[-/120/30 to -/240/180]
Plastic Pipe Device (fire collar)	≥150mm masonry and concrete walls, blank seal	[-/120/120]
	plasterboard walls (≥30mm lining both sides), blank seal	[-/120/120]
	≥150mm masonry and concrete walls, combustible pipes	[-/-/- to -/240/240]
	plasterboard walls (≥30mm lining both sides), combustible pipes	[-/-/- to -/120/120]
	≥150mm concrete floors	[-/-/- to -/240/240]
Fire Barrier Duct Wrap 615+	Duct wrap	[120/120/120]

10-2.4.9 Hilti Products

Table 8: Hilti products

Hilti Product	Comments	Fire Rating
Acrylic Sealant CP 606 (or CFS-ACR)	plasterboard walls (≥26mm lining both sides), blank seal	[-/90/120 to -/120/120]
	plasterboard walls (≥26mm lining both sides), copper pipe	[-/120/-]
	plasterboard walls (≥26mm lining both sides), cables	[-/120/90]
	plasterboard walls (≥32mm lining both sides), copper and brass	[-/120/- to -/120/60]
	≥100mm masonry and concrete walls, copper and steel pipes	[-/120/- to -/240/-]
	≥230mm masonry walls, copper and brass pipes	[-/240/- to -/240/180]
	≥150mm masonry walls, blank seal	[-/120/120]
	≥230mm masonry walls, blank seal	[-/240/240]
	≥150mm concrete floors, blank seal	[-/120/30 to -/240/240]
	≥150mm concrete floors, copper and steel pipes	[-/120/- to -/240/-]
	Bondeck concrete floors, blank seal	[-/120/120]
Silicone Sealant CP 601S	≥150mm concrete floors, blank seal	[-/240/240]
	≥100mm or ≥140mm masonry and concrete walls, copper and steel pipes	[-/120/- to -/240/-]

Hilti Product	Comments	
	≥150mm concrete floors, copper and steel pipes	[-/120/- to -/240/-]
Intumescent Sealant CP 611A (or FS-One)	plasterboard walls (≥13mm lining both sides), blank seal	[-/60/60]
	plasterboard walls (≥26mm lining both sides), blank seal	[-/120/120]
	plasterboard walls (≥26mm lining both sides), cables	[-/120/60 to -/120/120]
	plasterboard walls (≥26mm lining both sides), PVC and Steel conduits	[-/120/90 to -/120/120]
	≥120mm concrete floors, blank seal	[-/120/120]
	≥120mm concrete floors, cables	[-/120/90 to -/120/120]
	≥120mm concrete floors, PVC and Steel conduits	[-/120/90 to -/120/120]
Firestop Foam CP 660 (or CFS-F FX)	plasterboard walls (≥26mm lining both sides), blank seal	[-/120/120]
	plasterboard walls (≥26mm lining both sides), cables, steel pipes	[-/120/60 to -/120/120]
	≥120mm concrete floors, blank seal]	[-/120/120]
	≥120mm concrete floors, cables, steel pipes	[-/120/90, -/180/90 or -/120/120]
Firestop Plug CFS-PL	≥75mm concrete walls, blank seal	[-/120/120]
	≥75mm concrete walls, cables, PVC and Steel conduits	[-/120/60 to -/120/120]
	≥120mm concrete floors, blank seal	[-/120/120]
	≥120mm concrete floors, cables, PVC and Steel conduits	[-/120/60 to -/120/120]
Firestop Block CFS-BL	plasterboard walls (≥26mm lining both sides), blank seal	[-/120/120]
	plasterboard walls (≥26mm lining both sides), cables, PVC and Steel conduits	[-/120/90 to -/120/120]
	≥100mm concrete walls, blank seal	[-/120/120]
	≥100mm concrete walls, cables, PVC and Steel conduits	[-/120/90 to -/120/120]
	≥120mm concrete floors, blank seal	[-/60/60 to -/120/120]
	≥120mm concrete floors, cables, PVC and Steel conduits	[-/120/90 to -/120/120]
Firestop Sleeve CFS-SL	plasterboard walls (≥26mm lining both sides, 100-300mm thick), blank seal	[-/120/60]
	plasterboard walls (≥26mm lining both sides, 100-300mm thick), cables	[-/120/60]
	100-300mm concrete walls, blank seal	[-/120/120]
	100-300mm concrete walls, cables	[-/120/60 to -/120/120]
	100-300mm concrete floors, blank seal	[-/120/120]
	100-300mm concrete floors, cables	[-/120/60 to -/120/120]
Firestop Collar CP 643N (or CFS-C P Collar)	plasterboard walls (≥25mm lining both sides), PVC pipes	[-/120/90 to -/120/120]

Hilti Product	Comments	
	plasterboard walls ($\geq 25\text{mm}$ lining both sides), HDPE pipes	[-/120/90 to -/120/120]
	$\geq 100\text{mm}$ masonry and concrete walls, PVC pipes	[-/180/180]
	$\geq 100\text{mm}$ masonry and concrete walls, PE pipes	[-/180/180]
	$\geq 100\text{mm}$ masonry and concrete walls, ABS pipes	[-/180/120]
	$\geq 150\text{mm}$ masonry and concrete walls, PVC pipes	[-/240/240]
	$\geq 150\text{mm}$ masonry and concrete walls, PE pipes	[-/240/240]
	$\geq 150\text{mm}$ masonry and concrete walls, ABS pipes [-/120/120 to -/240/240]	[-/120/120 to -/240/240]
	$\geq 150\text{mm}$ concrete floors, combustible pipes	[-/60/60 to -/240/240]
Firestop Collar Plus CP 644 (or CFS-C P Collar)	plasterboard walls ($\geq 32\text{mm}$ lining both sides), combustible pipes	[-/120/90 to -/180/180]
	$\geq 115\text{mm}$ masonry and concrete walls, PVC pipes	[-/120/90 to -/120/120]
	$\geq 115\text{mm}$ masonry and concrete walls, PE pipes	[-/120/90 & -/180/60 to -/180/180]
	$\geq 115\text{mm}$ masonry and concrete walls, PPR pipes	[-/120/90 to -/180/120]
	$\geq 115\text{mm}$ masonry and concrete walls, Raupiano Plus pipes	[-/120/120]
	$\geq 128\text{mm}$ masonry and concrete walls, PVC pipes	[-/120/120]
	$\geq 128\text{mm}$ masonry and concrete walls, PE pipes	[-/120/120 & -/180/60 to -/180/180]
	$\geq 128\text{mm}$ masonry and concrete walls, PPR pipes	[-/120/120 to -/180/180]
	$\geq 120\text{mm}$ concrete floors, PVC pipes	[-/240/240]
	$\geq 120\text{mm}$ concrete floors, PE pipes	[-/240/240]
	$\geq 120\text{mm}$ concrete floors, PPR pipes	[-/120/120 to -/240/120]
	$\geq 120\text{mm}$ concrete floors, Raupiano Plus pipes	[-/120/120]
Firestop Bandage CFS-B	plasterboard walls ($\geq 26\text{mm}$ lining both sides), copper and steel pipes	[-/60/60 to -/120/120]
	$\geq 120\text{mm}$ concrete floors (+ $\geq 30\text{mm}$ plasterboard top patch), copper and steel pipes	[-/60/60 to -/120/120]
Firestop Wrap CP 648	$\geq 115\text{mm}$ masonry and concrete walls, combustible pipes	[-/90/90 to -/120/120]
	$\geq 150\text{mm}$ concrete floors, combustible pipes	[-/90/90 to -/240/240]

10-2.4.10 Allproof Products

Table 9: Allproof products

Allproof Product	Comments	Fire Rating
Allproof Fire Collars and Wraps	≥150mm concrete walls, combustible pipes	[-/120/120 to -/180/180]
	plasterboard walls (≥19mm lining both sides), combustible pipes	[-/30/30 to -/120/120]
	≥150mm masonry and concrete floors, combustible pipes	[-/90/90, or -/120/- to -/120/120]
	≥75mm concrete floors, combustible pipes	[-/60/60]
	≥120mm concrete floors, combustible pipes	[-/120/120]

10-2.4.11 Bostik Products

Table 10: Bostik products

Bostik Product	Comments	Fire Rating
Firecaulk Sealant	≥120mm masonry and concrete walls, blank seal	[-/120/120]
	≥120mm concrete floors, blank seal	[-/120/120]
	≥150mm masonry and concrete walls, blank seal	[-/180/180]
	≥150mm concrete floors, blank seal	[-/180/180]
	≥170mm masonry and concrete walls, blank seal	[-/240/240]
	≥170mm concrete floors, blank seal	[-/240/240]

10-2.4.12 Firepro Products

Table 11: Firepro products

Firepro Product	Comments	Fire Rating
M706 Sealant	≥120mm concrete walls, blank seal	[-/180/60 to -/180/180]
	≥120mm concrete walls, non-combustible pipes	[-/90/30 or -/180/- to -/180/180]
	≥120mm concrete walls, cables	[-/180/90]
	≥120mm concrete floors, blank seal	[-/120/60 to -/240/120]
M707 Sealant	≥145mm concrete walls, blank seal	[-/240/30 to -/240/240]
	≥145mm concrete walls, cables	[-/240/240]
	≥120mm concrete floor, blank seal	[-/240/240]
	≥120mm concrete floor, cables	[-/240/180]
	≥120mm concrete floor, combustible pipes	[-/120/120]
B306 Wrap	plasterboard walls (≥13mm lining both sides), combustible pipes	[-/60/60]
	plasterboard walls (≥19mm lining both sides), combustible pipes	[-/60/60 to -/120/120]
	plasterboard walls (≥32mm lining both sides), combustible pipes	[-/120/120]
	≥120mm concrete walls, combustible pipes	[-/120/120 to -/180/180]

Firepro Product	Comments	Fire Rating
	≥150mm concrete walls, insulated steel pipes	[-/120/120 to -/180/180]
	≥120mm concrete floor, combustible pipes	[-/120/120 to -/240/240]

10-2.4.13 Promat Products

Table 12: Promat products

Promat Product	Comments	Fire rating
IBS System	plasterboard walls (≥32mm lining both sides), blank seal	[-/60/60]
	plasterboard walls (≥32mm lining both sides), cables	[-/120/30 to -/180/180]
	plasterboard walls (≥32mm lining both sides), steel pipe	[-/120/30]
	plasterboard walls (≥32mm lining both sides), copper pipe	[-/120/- to -/180/-]
	plasterboard walls (≥32mm lining both sides), fire damper seal	[-/120/-]
	≥140mm concrete walls, blank seal	[-/210/120 to -/240/120]
	≥115mm concrete floor, blank seal	[-/60/120]
	≥120mm concrete floor, blank seal	[-/180/90 to -/240/180]
	≥120mm concrete floor, cables	[-/180/60]
	≥120mm concrete floor, PVC pipe	[-/180/120]
	≥120mm concrete floor, copper and brass pipes	[-/180/- to -/180/120]
	≥150mm concrete floor, blank seal	[-/270/240]
Promatech-L and Promatech-H Duct Assemblies	Duct assembly	[120/120/- to 240/240/-]
Promaseal Bulkhead Sealer System	≥100mm concrete masonry wall, blank seal	[-/120/120]
	≥100mm concrete masonry wall, cables	[-/120/- to -/120/60]
	≥100mm concrete masonry wall, steel pipe	[-/120/-]
	≥230mm concrete masonry wall, blank seal	[-/120/120]
	≥230mm concrete masonry wall, cables	[-/120/- to -/120/60]
	≥230mm concrete masonry wall, steel pipe	[-/120/-]
	≥120mm concrete floor, blank seal	[-/120/60 to -/120/120]
	≥120mm concrete floor, cables	[-/120/30 to -/120/90]
	≥120mm concrete floor, steel pipe	[-/120/30]
	≥170mm concrete floor, blank seal	[-/120/90]
	≥170mm concrete floor, cables	[-/120/30 to -/120/60]
	≥170mm concrete floor, steel pipe	[-/120/30]
	≥200mm concrete floor, blank seal	[-/120/90 to -/120/120]
	≥200mm concrete floor, cables	[-/120/30 to -/150/30 or -/120/90]
≥200mm concrete floor, steel pipe	[-/120/30 to -/150/30]	

10-2.4.14 Pyropanel Products

Table 13: Pyropanel products

Pyropanel Product	Comments	Fire Rating
RF Fire Collar	≥120mm concrete floor, combustible pipes	[-/120/120]
GV Fire Collar	plasterboard walls (≥29mm lining both sides), combustible pipes	[-/120/90]

10-2.4.15 Ryanfire (Using Firetherm products)

Table 14: Ryan fire products

Ryanfire Product	Comments	Fire Rating
Intumastic	plasterboard wall (≥13mm lining both sides), steel pipe (using 25mm thick intumastic - 13mm plasterboard picture frame)	[-/60/30]
	plasterboard wall (≥13mm lining both sides), 10mm wide (using 10mm deep intumastic linear gap seal)	[-/60/0]
	plasterboard wall (≥26mm lining both sides), steel pipe (using 6mm intumastic plus 50mm thick Rockwool backing, Gi Intusleeve)	[-/120/90]
	plasterboard wall (≥26mm lining both sides), 30mm wide (using 25mm thick intumastic 25mm Rockwool backing)	[-/120/120]
	plasterboard wall (≥26mm lining both sides), 30mm wide (using 15mm thick intumastic 50mm thick Rockwool backing)	[-/120/120]
	plasterboard wall (≥26mm lining both sides), 40mm wide gap (using 25mm thick intumastic onto PE backer rod)	[-/120/120]
	plasterboard ceiling (≥25mm lining on underside), steel pipe (using 25mm thick intumastic, no backer)	[-/60/0]
	plasterboard ceiling (≥25mm lining on underside), copper pipe (using 25mm thick intumastic, no backer)	[-/60/0]
	≥150mm concrete wall, 35mm wide gap (using 17mm thick intumastic)	[-/180/180]
	≥150mm concrete wall, duct, 25mm (using intumastic over 100mm Rockwool)	[-/120/0]
	≥150mm concrete floor, steel pipe (using 3mm thick intumastic plus 100mm Rockwool backing)	[-/120/90]
	≥150mm concrete floor, 35mm wide gap (using 35mm thick intumastic)	[-/180/120]
	≥150mm concrete floor, 210mm wide gap (using 3mm thick intumastic backed by 100mm Rockwool)	[-/180/180]
	≥175mm concrete floor, 210mm Wide Gap (using 3mm thick intumastic backed by 100mm Rockwool)	[-/240/240]
Intubatt & Intumastic	plasterboard wall (≥13mm lining both sides), steel pipe (using Pattress Intubatt)	[-/60/30]

Ryanfire Product	Comments	Fire Rating
	plasterboard wall (≥ 13 mm lining both sides), cable bundle (using Pattress Intubatt)	[-/60/60]
	plasterboard wall (≥ 13 mm lining both sides), cable tray (using Pattress Intubatt)	[-/60/60]
	plasterboard wall (≥ 26 mm lining both sides), cable bunches (using Pattress Intubatt - No Coat Back or Sleeving)	[-/120/120]
	plasterboard wall (≥ 26 mm lining both sides), cable tray (using Pattress Intubatt - No Coat Back or Sleeving)	[-/120/120]
	plasterboard wall (≥ 26 mm lining both sides), cable ladder/trays (using Intubatt And Intubatt Box)	[-/120/120]
	plasterboard wall (≥ 26 mm lining both sides), steel pipe (using Pattress Intubatt)	[-/120/60]
	plasterboard wall (≥ 26 mm lining both sides), steel/copper pipe (using Pattress Intubatt with Rockwool 600mm Intusleeve)	[-/120/120]
	plasterboard wall (≥ 26 mm lining both sides), top of wall seal (using single Intubatt - Pattress Overlay)	[-/120/120]
	plasterboard wall (≥ 26 mm lining both sides), top of wall seal (using double Intubatt Pattress fit)	[-/120/120]
	plasterboard wall (≥ 26 mm lining both sides), blank seal (using Pattress Patch)	[-/120/120]
	plasterboard wall (≥ 26 mm lining both sides), damper (using Pattress Intubatt)	[-/120/0]
	plasterboard wall (≥ 26 mm lining both sides), timber joist (using double layer Intubatt with 100mm Intusleeve both sides)	[-/120/120]
	plasterboard wall (≥ 32 mm lining both sides), copper pipe (using Pattress Intubatt)	[-/120/120]
	plasterboard wall (≥ 32 mm lining both sides), cable ladder (using double Intubatt plus TBA Glass Intusleeve)]	[-/240/180]
	≥ 170 mm masonry wall, brass pipe (using Pattress Intubatt - No Intusleeve)	[-/240/0]
	≥ 170 mm masonry wall, brass pipe (using double layer Intubatt Plus 600mm X 40mm thick Rockwool Intusleeve)	[-/180/120]
	≥ 170 mm masonry wall, copper pipe/steel pipes (using double layer Intubatt, no Intusleeve)	[-/240/0]
	≥ 170 mm masonry wall, copper pipe/steel pipes (using double layer Intubatt plus 600mm X 40mm thick Rockwool Intusleeve)	[-/180/120]
	≥ 150 mm masonry wall, steel/copper pipes (using triple layer Intubatt)	[-/240/60]
	≥ 150 mm masonry wall, Cable tray (using Pattress Intubatt) [-/120/120]	[-/120/120]

Ryanfire Product	Comments	Fire Rating
	≥150mm masonry wall, blank seal (using single Intubatt)	[-/120/120]
	≥150mm masonry wall, blank seal (using double Intubatt)]	[-/240/120]
	≥150mm masonry wall, inspection hole (using double layer Intubatt)	[-/120/120]
	≥150mm concrete wall, Intubatt wall (using double Intubatt - Intumastic Joints)	[-/240/240]
	≥150mm concrete wall, damper (using double layer Intubatt)	[-/120/0]
	≥170mm concrete wall, blank seal (using triple Intubatt)	[-/240/240]
	≥77mm speedpanel wall, cable bundle (using Patress Intubatt 60mm Intumastic Volcano)	[-/120/120]
	≥77mm speedpanel wall, optical cable bundle (using Patress Intubatt 60mm Intumastic Volcano)	[-/120/120]
	≥77mm speed wall, blank seal (using Patress Intubatt)	[-/120/120]
	≥77mm speed wall, top of wall seal (using Patress Intubatt)	[-/120/120]
	plasterboard ceiling (≥25mm lining on underside), steel pipe (using Intubatt single layer)	[-/60/0]
	plasterboard ceiling (≥26mm lining on underside), timber joist (using double layer Intubatt with 100mm Intusleeve both sides)	[-/120/120]
	≥120mm concrete floor, cable bundle (using single Intubatt)	[-/90/60]
	≥120mm concrete floor, cable ladder (using double Intubatt plus TBA Glass Intusleeve)	[-/240/180]
	≥120mm concrete floor, optical cable bundle (using double Intubatt - 60mm Tall Intumastic Cone - In Floor)	[-/120/120]
	≥120mm concrete floor, blank seal (using double Intubatt)	[-/120/120]
	≥150mm concrete floor, steel pipe (using double layer Intubatt)	[-/120/0]
	≥150mm concrete floor, cable tray (using single Intubatt)	[-/60/30]
	≥150mm concrete floor, cable tray (using double Intubatt - No Sleeving)	[-/120/30]
	≥150mm concrete floor, cable ladder/trays (using double Intubatt and Intubatt Box above)	[-/120/120]
	≥150mm concrete floor, blank seal (using single Intubatt)	[-/120/120]
	≥150mm concrete floor, blank seal (using double Intubatt)	[-/240/240]
	≥150mm concrete floor, blank seal (using triple Intubatt)	[-/240/240]

Ryanfire Product	Comments	Fire Rating
	≥150mm concrete floor, 200mm Intubatt linear gap (using Intubatt Screwed to Timber Intubattens)	[-/120/60]
	≥120mm concrete floor/wall, bulkhead (using double layer Intubatt)	[-/120/120]
Intubatt & Intustrap	plasterboard wall (≥26mm lining both sides), 38mm A/Flex steel pipe (using Patress fit Intubatt and Intustrap)	[-/120/60]
	plasterboard wall (≥26mm lining both sides), 50mm F/Glass steel pipe (using Patress fit Intubatt and Intustrap)	[-/120/90]
	plasterboard wall (≥26mm lining both sides), 38mm A/Flex copper pipe (using Patress fit Intubatt and Intustrap)	[-/120/90]
	plasterboard wall (≥26mm lining both sides), 50mm F/Glass copper pipe (using Patress fit Intubatt and Intustrap)	[-/120/90]
	plasterboard wall (≥26mm lining both sides), Conduit - 82mm (using Patress fit Intubatt with Intustrap)	[-/120/120]
	plasterboard wall (≥26mm lining both sides), Conduit - 55mm – (using double Intubatt with Intustrap)	[-/120/120]
	plasterboard wall (≥26mm lining both sides), PVC pipe (using Intubatt and Intustrap)	[-/120/120]
	plasterboard wall (≥32mm lining both sides), PVC pipe (using Intubatt and Intustrap)	[-/240/240]
	plasterboard wall (≥32mm lining both sides), 50mm F/Glass copper pipe (using Patress fit Intubatt and Intustrap)	[-/180/90]
	plasterboard wall (≥32mm lining both sides), 38mm A/Flex copper pipe (using Intubatt and Intustrap)	[-/180/90]
	Speed wall, PIR/A/Flex/F/Glass copper pipe (using Intubatt and Intustrap)	[-/120/120]
	≥120mm concrete floor, 38mm A/Flex copper pipe (using Intubatt and Intustrap - double layer)	[-/120/120]
	≥150mm concrete floor, 50mm F/Glass steel pipe (using single Patress Intubatt and Intustrap from below)	[-/90/30]
	≥120mm concrete floor, HDPE pipe (using Intubatt and Intustrap - double layer)	[-/120/120]
	Intustrap	plasterboard wall (≥26mm lining both sides), 32mm F/Glass copper pipe (using Intustrap plus Intumastic - GI Intusleeve)
≥150mm concrete floor, 55mm F/Glass plastic pipe (using Intustrap)		[-/120/120]
≥150mm concrete floor, 50mm F/Glass copper pipe (using Intustrap plus Intumastic)		[-/120/120]
≥150mm concrete floor, 35mm A/Flex copper pipe (using Intustrap plus Intumastic)		[-/120/120]

Ryanfire Product	Comments	Fire Rating
Intusil	plasterboard wall (≥ 26 mm lining both sides), Copper pipe 25mm (using Intusil backed 25mm Rockwool)	[-/120/0]
	plasterboard wall (≥ 26 mm lining both sides), 30mm wide gap (using 15mm thick Intusil onto 50mm thick Rockwool backing) [-/120/120]	[-/120/120]
	plasterboard wall (≥ 26 mm lining both sides), 40mm wide gap (using 25mm thick Intusil backed with PE Backing Rod)	[-/120/120]
	≥ 150 mm concrete wall, 35mm wide gap (using 17mm thick Intusil)	[-/180/180]
	≥ 175 mm concrete wall, 35mm wide gap (using 17mm thick Intusil)	[-/240/240]
	≥ 150 mm concrete floor, 35mm wide gap (using 35mm thick Intusil)	[-/180/180]
	≥ 150 mm concrete floor, 120mm wide gap (using 3mm thick Intusil backed by 100mm Rockwool)	[-/180/180]
	≥ 150 mm concrete floor, 220mm wide gap (using 3mm thick Intusil backed by 100mm Rockwool)	[-/120/120]
	≥ 150 mm concrete floor, 80mm wide gap (using Intusil 20mm thick backed by 60mm thick Rockwool)	[-/120/120]
	≥ 150 mm concrete floor, 80mm wide gap (using Intusil 20mm thick backed by 60mm thick Rockwool)	[-/120/90]
	≥ 175 mm concrete floor, 35mm wide gap (using 35mm thick Intusil)	[-/240/240]
≥ 175 mm concrete floor, 120mm wide gap (using 3mm thick Intusil backed by 100mm Rockwool)	[-/240/240]	
Intumastic HP	plasterboard wall (≥ 13 mm lining both sides), Cable – single (using Intumastic HP/PE Backing Rod)	[-/60/60]
	plasterboard wall (≥ 13 mm lining both sides), Cable Tray (using plasterboard Picture Frame Intumastic HP/PE Backing Rod)	[-/60/60]
	plasterboard wall (≥ 13 mm lining both sides), Cable bundle (using plasterboard Picture Frame - Intumastic HP/PE Backing Rod)	[-/60/60]
	plasterboard wall (≥ 26 mm lining both sides), Conduit - 55mm Dia (using 25mm thick Intumastic HP - PE Backing Rod)	[-/120/120]
	plasterboard ceiling (≥ 25 mm lining on underside), 25mm A/Flex - Metal pipe (using 25mm thick Intumastic HP - No Backer)	[-/60/30]
	plasterboard ceiling (≥ 25 mm lining on underside), Cable bundle (using 25mm thick Intumastic HP - No Backer)	[-/60/30]
	plasterboard ceiling (≥ 25 mm lining on underside), Cable tray (using 25mm thick Intumastic HP - No Backer)	[-/60/0]

Ryanfire Product	Comments	Fire Rating
	≥150mm concrete floor, 40mm A/Flex Metal pipe (using 30mm thick Intumastic HP 25mm thick Rockwool Backing)	[-/90/60]
	≥150mm concrete floor, Conduit - 55mm (using Intumastic HP/Rockwool Backing)	[-/120/120]
	≥150mm concrete floor, Cable bundle (using 30mm thick Intumastic HP/25mm thick 64kg Rockwool Backing)	[-/120/120]
	≥150mm concrete floor, Optical Cable bundle (using 30mm thick Intumastic HP - 25mm thick Rockwool Backing)	[-/120/120]
Intucollar	plasterboard wall (≥19mm lining both sides), PVC pipe (using Intucollar GV)	[-/120/60]
	plasterboard wall (≥19mm lining both sides), PVC pipe (using Intucollar GV)	[-/120/120]
	plasterboard wall (≥26mm lining both sides), PVC pipe (using Intucollar)	[-/120/60]
	plasterboard wall (≥26mm lining both sides), PVC pipe (using Intucollar)	[-/60/60]
	plasterboard wall (≥26mm lining both sides), HDPE pipe (using Intucollar)	[-/120/120]
	plasterboard wall (≥26mm lining both sides), PPR pipe (using Intucollar)	[-/90/90]
	plasterboard wall (≥26mm lining both sides), ABS pipe (using Intucollar)	[-/90/90]
	plasterboard wall (≥26mm lining both sides), Cable bundle (using Intucollar - 82mm)	[-/120/120]
	plasterboard ceiling (≥25mm lining on underside), PVC pipe (using Intucollar - Fixed into Timber Noggs)	[-/60/30]
	≥150mm concrete floor, 25mm A/Flex - plastic pipe (using Intucollar)	[-/120/120]
	≥150mm concrete floor, 38mm A/Flex Metal pipe (using Intucollar)	[-/120/60]
	≥120mm concrete floor, PVC pipe (using Intucollar GV)	[-/120/120]
	≥120mm concrete floor, PVC pipe (using Intucollar GV)	[-/120/90]
	≥150mm concrete floor, HDPE pipe (using Intucollar)	[-/120/120]
	≥150mm concrete floor, HDPE pipe (using Intucollar)	[-/90/90]
	≥150mm concrete floor, PPR pipe (using Intucollar)	[-/120/120]
	≥150mm concrete floor, ABS pipe (using Intucollar)	[-/120/120]
	≥150mm concrete floor, PVC pipe (using Intucollar GV)	[-/180/180]
	≥150mm concrete floor, PVC pipe (using Intucollar)	[-/120/120]

Ryanfire Product	Comments	Fire Rating
	≥150mm concrete floor, Bundle - 82mm (using Intucollar - 80mm)	[-/120/120]
	≥170mm concrete floor, PVC pipe (using Intucollar GV)	[-/240/240]
Intucompound	≥150mm concrete floor, 38mm A/Flex steel pipe (using Intustrap and Intucompound)	[-/180/180]
	≥150mm concrete floor, 50mm F/Glass steel pipe (using Intustrap and Intucompound)	[-/60/60]
	≥150mm concrete floor, PVC pipe (using Intustrap and Intucompound)	[-/240/240]
	≥150mm concrete floor, PVC pipe 300mm (using Intusleeve and Intucompound)	[-/240/240]
	≥150mm concrete floor, PPR 300mm (using Intusleeve and Intucompound)	[-/240/240]
	≥150mm concrete floor, HDPE 300mm (using Intusleeve and Intucompound)	[-/240/240]
	≥150mm concrete floor, Cable ladders/Trays (using 100mm thick Intucompound with Intubatt Box above)	[-/240/120]
	≥150mm concrete floor, Blank Seal (using 100mm thick Intucompound)	[-/240/240]
	≥150mm concrete floor, Damper (using 100mm Intucompound on Shutter)	[-/240/0]
Electropad	plasterboard wall (≥13mm lining both sides), Plug Socket (using Socket Box un-exposed side)	[-/60/60]
	plasterboard wall (≥13mm lining both sides), Plug Socket (using Socket Box exposed side)	[-/60/60]
	plasterboard wall (≥26mm lining both sides), Plug Socket (using Socket Box un-exposed side)	[-/120/120]
	plasterboard wall (≥26mm lining both sides), Plug Socket (using Socket Box exposed side)	[-/120/120]
Intutransit	plasterboard wall (≥26mm lining both sides), Transit / Intubatt (using Intutransit In Intubatt with Foam Inserts)	[-/120/90]
	plasterboard wall (≥26mm lining both sides), Transit (using Intutransit with Foam Inserts - Cable Bunches)	[-/120/60]
	plasterboard wall (≥26mm lining both sides), Transit - Circular - Conduits (using Circ Intusleeve with Conduits Passing Through)	[-/120/120]
	plasterboard wall (≥32mm lining both sides), (using Transit in Intubatt with Foam Inserts)	[-/120/120]
	≥150mm concrete floor, Transit (using 3mm thick Intumastic Plus 100mm Rockwool Backing) [-/120/30]	[-/120/30]
Intuspan	≥150mm masonry wall, 100mm/75mm/50mm gap (using Intuspan)	[-/120/120]
	≥150mm concrete wall, 100mm gap (using Intuspan)	[-/120/120]



Ryanfire Product	Comments	Fire Rating
	≥150mm concrete floor, 50mm gap (using Intuspan)	[-/120/120]
	≥150mm concrete floor, 100mm gap (using Intuspan - with Z Clips)	[-/60/60]
Firetherm Firefly	≥120min fire separation, 1100mm gap (using Titan with Insulation below)	[-/120/120]
	≥120min fire separation, 1100mm gap (using Titan)	[-/120/60]
	≥120min fire separation, 1100mm gap (using Plus 60)	[-/120/30]
	≥120min fire separation, 1100mm gap (using Phoenix)	[-/120/0]
Intuvent	plasterboard wall (≥26mm lining both sides), (using Intuvent Intusleeve 300mm long Intusleeve)	[-/120/120]
	plasterboard wall (≥26mm lining both sides), Damper (using Intuvent lined around edges with Intubatt)	[-/60/30]

Appendix A Feedback Form

We love hearing from you. Please take a few moments to let us know how we can improve the *Property Services Design Standards and Guidelines*.

1.	Name:			
2.	Contact Details: (in case we need clarification)			
Complete this section if you have found a typo / formatting error. (If possible, attach a photo of the error)				
3.	Section No:		Page No/s:	
	Description of error:			
Complete this section if you have a suggestion about content.				
4.	Section No:		Page No/s: (if applicable)	
	Suggestion/s:			
Complete this section if you have any other suggestions for improvement.				
5.	Suggestion/s:			
6.	Email your feedback to PTechServices@auckland.ac.nz			
Thanks for your feedback!				

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