

5171RI RCS INTEGRA LIGHTWEIGHT CONCRETE INTERTENANCY SYSTEM

1 GENERAL

This section relates to the supply and fixing of **Resene Construction Systems** INTEGRA Lightweight Concrete Inter-tenancy System. The system is a proprietary high-performance wall system that provides horizontal fire and acoustic separation between adjacent tenancies in the same building. The core component of the INTEGRA system is a high-tech lightweight concrete panel and inter-tenancy bracket installed between traditional timber framing, insulated and plasterboard lined on the outer face. A cavity is created between the INTEGRA lightweight concrete and the timber framing through the use of a proprietary Inter-tenancy Bracket and Dampener. The INTEGRA Lightweight Concrete Inter-tenancy System is suitable for use in medium and high-density housing, i.e. Terraced Housing

1.1 RELATED WORK

Refer to ~ for ~.

1.2 ABBREVIATIONS AND DEFINITIONS

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

The following abbreviations apply specifically to this section:

AAC	Autoclaved aerated concrete
MSDS	Material safety data sheets
RCS	Resene Construction Systems
FRR	Fire Resistance Rating
STC	Sound transmission class
IIC	Impact insulation class
Rw	Sound Reduction Index
SG	Stress Grade
FSTC	Field Sound Transmission Class

Documents

1.3 DOCUMENTS

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

AS/NZS 2589	Gypsum linings - Application and finishing
AS 3566	Self-drilling screws for the building and construction industries
NZS 3604	Timber-framed buildings
NZBC C/AS2-AS7	Building Performance - Acceptable Solutions
WorkSafe NZ	Guidelines for the provision of facilities and general safety in the construction industry
MPNZA	Health and Safety Programme
Health and Safety at Work Act 2015	

1.4 MANUFACTURER/SUPPLIER DOCUMENTS

Manufacturer's and supplier's documents related to this section are:

- **Resene Construction Systems** Technical Manual
- **Resene Construction Systems** Trade Spec™
- **Resene Construction Systems** Project Guide
- **Resene Construction Systems** INTEGRA Lightweight Concrete Intertency System Manual

Materials and execution to **Resene Construction Systems** specification except where varied by this specification and supported by architectural detailing.

Manufacturer/supplier contact details

Company:	Resene Construction Systems
Web:	www.reseneconstruction.co.nz
Email:	help@reseneconstruction.co.nz
Telephone:	0800 50 70 40

Warranties

1.5 WARRANTY - MANUFACTURER/SUPPLIER

Provide a material manufacturer/supplier warranty:

10 years: For materials by **Resene Construction Systems**

- Provide this warranty on the **Resene Construction Systems** standard form (if unavailable, use the standard form in the general section 1237WA WARRANTY AGREEMENT)
- Commence the warranty from the date of Practical Completion of the contract works.

Refer to the general section 1237 WARRANTIES for additional requirements.

Requirements

1.6 QUALIFICATIONS

Resene Construction Systems installers and builders to be experienced, competent workers familiar with **Resene Construction Systems** installation techniques.

1.7 NO SUBSTITUTIONS

The INTEGRA Lightweight Concrete Inter-tenancy System is a proprietary system that has been carefully designed to New Zealand conditions and has been independently tested and assessed to ensure it meets the performance criteria as outlined in the NZBC. It is imperative to use only **Resene Construction Systems** proprietary product where specified and that the design and construction of the Inter-tenancy System is followed so that the specified level of fire safety, structural and sound performance has been achieved on site.

1.8 ACCEPTABLE PRODUCT/MATERIAL SUPPLIERS

Where a product or material supplier is named in SELECTIONS, the product/material must be provided by the named supplier. Where more than one named supplier, any one of the named suppliers will be acceptable.

1.9 HEALTH AND SAFETY

Refer to the requirements of the [Health and Safety at Work Act 2015](#) and [WorkSafe NZ: Guidelines for the provision of facilities and general safety in the construction industry](#).

If the elimination or isolation of potential hazards and risks is not possible then minimise hazards and risks in this work on site by using the proper equipment and techniques as required in the MPNZA Health and Safety Programme. Supply protective clothing and equipment as necessary. Inform employees and others on site of the hazards and risks and put into place procedures for dealing with emergencies. Obtain from **Resene Construction Systems** the material safety data sheets (MSDS) for each product. Keep these sheets on site and comply with the required safety procedures.

Performance

1.10 PERFORMANCE

Accept responsibility for the fire, structural and acoustic performance of the INTEGRA Lightweight Concrete Inter-tenancy System installation.

1.11 SOUND RATING

The INTEGRA Lightweight Concrete Inter-tenancy System literature provides STC options of 64-67. Refer to SELECTIONS for system details and STC ratings. Penetrations through the linings are permitted within limitations. Refer to **Resene Construction Systems** INTEGRA Lightweight Concrete Inter-tenancy System literature to ensure correct forming and treating of penetrations to ensure the specified performance is met. Ensure absence of adjoining flanking paths.

1.12 FIRE RATING

The INTEGRA Lightweight Concrete Inter-tenancy System literature provides an FRR of 120/120/120. Refer to SELECTIONS for system details.

Compliance Information

1.13 INSPECTIONS

Allow to inspect the whole of the work at each stage. Determine a programme for inspections including notification when each part and stage of the work is ready for inspection prior to the work commencing. Permit representatives of **Resene Construction Systems** to inspect the work in progress and to take samples of their products from site if requested. Refer to **Resene Construction Systems** Project Guide.

2 PRODUCTS

Materials

2.1 INTEGRA AAC 50MM PANEL

50mm thick fibre-reinforced aerated concrete, 2200mm x 600mm panel.

2.2 GIB® PLASTERBOARD

Linings to timber framed walls:

GIB® Standard plasterboard - 10mm and 13mm

GIB Ultralite® - 10mm and GIB Ultralite Plus® 13mm

GIB Bracelene® / Noiseline® - 10mm and 13mm

GIB Aqualine® - 10mm and 13mm

Components

2.3 FASTENERS

INTEGRA Lightweight Concrete Inter-tenancy System Screws must be used; available in the following sizes:

12g x 75mm Galvanised with EPDM Washer - Used to secure the INTEGRA Panel to the Inter-tenancy Bracket

12g x 45mm Galvanised with EPDM Washer - Used to secure the Inter-tenancy Bracket to the structure

2.4 INTERTENANCY BRACKETS

Aluminium bracket

Supplied in boxes of 50 brackets including the above fasteners.

50mm wide x 3mm thick

75mm x 50mm legs

Includes a sound and heat resistant dampener with spacers to limit contact to the surface being attached.

2.5 PSL AAC ADHESIVE

Plaster used for bonding AAC panels together, patching panels, and securing the panel to a concrete foundation. Ensure surface is clean, sound, dry and free from dust, dirt, grease, mould and lichen. Painted surfaces should have a slurry coat applied.

Supplied in 20kg bags.

2.6 FIRE RESISTANT MINERAL WOOL PACKING

Installed to fire-stop at the top of the INTEGRA Lightweight Concrete Inter-tenancy System below roofing.

Thickness to match cavity. Minimum density 40kg/m³.

Components: framed walls

2.7 WALL CAVITY INSULATION

PINK BATTS® R2.2 (90mm) glass wool insulation installed between the studs and nogs in both wall frames.

Refer to appropriate PINK BATTS® section. Glass-wool thermal insulation segments for use in framed walls.

Accessories

2.8 SEALANT

GIB Fire Soundseal® - multi use acoustic sealant that also resists the passage of smoke and fire.

2.9 PRIMING STEEL

Resene Galvo-Prime; brush-applied waterborne galvanised iron primer or Zinc-rich spray primer; solvent borne spray application.

3 EXECUTION

Conditions

3.1 DELIVERY

Refer to 1270 CONSTRUCTION section for requirements relating to delivery, storage and handling of product.

Keep product dry in transit. Take delivery of product dry and undamaged. Reject all damaged materials.

3.2 STORAGE

Deliver all materials in original unopened packaging with labels intact. Provide dry storage on site, stack carefully, protect from mechanical damage.

3.3 SUBSTRATE

Carry out all necessary inspections and preparatory work to the supporting elements of the **Resene**

Construction Systems INTEGRA Lightweight Concrete Inter-tenancy System prior to installation. Do not

commence work until the framing is plumb, level and to the standard required by [AS/NZS 2589](#) and **Resene**

Construction Systems INTEGRA Lightweight Concrete Inter-tenancy System requirements.

3.4 TIMBER FRAME MOISTURE CONTENT

Maximum allowable moisture content to [AS/NZS 2589](#) **Gypsum linings - Application and finishing** for timber framing at lining: 18% or less for plasterboard linings.

Installation: central barrier

3.5 PANEL APPLICATION CONDITIONS

Carry out panel fixing to **Resene Construction Systems** specification under conditions which will not adversely affect the finished work. Refer to **Resene Construction Systems** INTEGRA Lightweight Concrete Inter-tenancy System specification.

3.6 ALIGNMENT OF FRAMING

To the standard required by **Resene Construction Systems**, plumb, level and in true alignment.

3.7 FIRE REQUIREMENTS

To maintain fire rating and integrity of the areas noted as 'fire rated' on the drawings between residential units, comply with all relevant aspects of the **Resene Construction Systems** INTEGRA Lightweight Concrete Inter-tenancy System literature according to the fire resistance rating (FRR) or other relevant product manufacturers' recommendations.

Piped and cabled services within **Resene Construction Systems** INTEGRA Lightweight Concrete Inter-tenancy System timber framing cavities shall be securely fastened to the timber framing, and must not be in contact with, or pass through, the central barrier. Minimum 10mm clearance must be provided between any plumbing or electrical services and the central barrier.

3.8 ACOUSTIC REQUIREMENTS

To maintain acoustic integrity of the areas noted as 'sound rated' on the drawings, comply with all relevant aspects of the **Resene Construction Systems** INTEGRA Lightweight Concrete Inter-tenancy System literature according to the specified sound transmission class (STC) rating or other relevant product manufacturers' recommendations.

3.9 PENETRATIONS

Under no circumstances should any services penetrate the INTEGRA Lightweight Concrete Inter-tenancy System panels unless approved by a Fire Engineer. Services may however be concealed within the timber framed section of the wall system, subject to the following constraints:

- A minimum of 10mm clearance to be maintained between any penetrations and the central barrier.
- Penetrations to be no larger than 65mm diameter or 90mm x 50mm through the plasterboard lining. There is no requirement to firestop these penetrations.
- No more than two penetrations per 600mm bay of framing to be made.

3.10 PRIMING STEEL

Use either **Resene Galvo-Prime** or Zinc rich spray primer to ensure that all exposed steel has been spot primed.

Finishing: general

3.11 FINISHING GENERALLY

To GIB® Plasterboard Installation Manual and [AS/NZS 2589 Gypsum linings - Application and finishing](#)

Finishing: framed walls - stopping

3.12 FINISHING AND STOPPING

Refer to 5113G GIB® PLASTERBOARD LININGS section for finishing and stopping of plasterboard linings.

Completion & Commissioning

3.13 REPLACE

Check for damage and defective work - repair or replace as necessary to the required standard.

3.14 REMOVE

Remove debris, unused materials and elements from the site.

3.15 LEAVE

Leave work to the standard required by follow-on procedures and in accordance with the manufacturer's warranty requirements.

3.16 COMPLETION - TESTS & CERTIFICATION

Refer to 1270 CONSTRUCTION for general test and certification requirements at completion.

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4 SELECTIONS

For further details on selections go to www.reseneconstruction.co.nz.

Substitutions are not permitted to the following **Resene Construction Systems** materials or components, unless stated otherwise.

Resene Construction Systems INTEGRA Lightweight Concrete Intertency System

4.1 RCS INTEGRA PANEL SYSTEM INTA 120a
 INTA120a - INTEGRA Lightweight Concrete Intertency System
 120/120/120 - 64STC

System reference: INTA120a comprised of:

- 1x 10mm GIB® Standard plasterboard lining to timber frame
- 50mm thick INTEGRA Lightweight Concrete central barrier panel
- 1x 10mm GIB® Standard plasterboard lining to timber frame

Sound Performance: STC 64, Rw 62

Location	Nom thickness (mm)	FRR	STC	Rw	Acoustic insulation
~	290-330mm	120/120/120	64	62	Pink Batts® R2.2

4.2 RCS INTEGRA PANEL SYSTEM INTA 120b
 INTA120b - INTEGRA Lightweight Concrete Intertency System
 120/120/120 - 66STC

System reference: INTA120b comprised of:

- 1x 13mm GIB® Standard plasterboard lining to timber frame
- 50mm thick INTEGRA Lightweight Concrete central barrier panel
- 1x 13mm GIB® Standard plasterboard lining to timber frame

Sound Performance: STC 66, Rw 65

Location	Nom thickness (mm)	FRR	STC	Rw	Acoustic insulation
~	290-330mm	120/120/120	66	65	Pink Batts® R2.2

4.3 RCS INTEGRA PANEL SYSTEM INTA 120c
 INTA120c - INTEGRA Lightweight Concrete Intertency System
 120/120/120 - 67STC

System reference: INTA120c comprised of:

- 2x 10mm GIB® Standard plasterboard lining to timber frame
- 50mm thick INTEGRA Lightweight Concrete central barrier panel
- 2x 10mm GIB® Standard plasterboard lining to timber frame

Sound Performance: STC 67, Rw 66

Location	Nom thickness (mm)	FRR	STC	Rw	Acoustic insulation
~	290-330mm	120/120/120	67	66	Pink Batts® R2.2

4.4 RCS INTEGRA PANEL SYSTEM INTA 120d
 INTA120d - INTEGRA Lightweight Concrete Intertency System
 120/120/120 - 66STC

System reference: INTA120d comprised of:

- 1x 10mm GIB® Noiseline/Braceline plasterboard lining to timber frame
- 50mm thick INTEGRA Lightweight Concrete central barrier panel
- 1x 10mm GIB® Noiseline/Braceline plasterboard lining to timber frame

Sound Performance: STC 66, Rw 65

Location	Nom thickness (mm)	FRR	STC	Rw	Acoustic insulation
~	290-330mm	120/120/120	66	65	Pink Batts® R2.2

4.5 RCS INTEGRA PANEL SYSTEM INTA 120e
INTA120e - INTEGRA Lightweight Concrete Intertency System
120/120/120 - 67STC

System reference: INTA120e comprised of:

- 1x 13mm GIB® Noiseline/Braceline plasterboard lining to timber frame
- 50mm thick INTEGRA Lightweight Concrete central barrier panel
- 1x 13mm GIB® Noiseline/Braceline plasterboard lining to timber frame

Sound Performance: STC 67, Rw 67

Location	Nom thickness (mm)	FRR	STC	Rw	Acoustic insulation
~	290-330mm	120/120/120	67	67	Pink Batts® R2.2

Work Section Q&A

Select INTEGRA System required:

- INTA120a: 4.1
- INTA120b: 4.2
- INTA120c: 4.3
- INTA120d: 4.4
- INTA120e: 4.5