

## 0473P REGUPOL ACOUSTIC FLOOR UNDERLAYS

### Branded worksection

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### Worksection abstract

This branded worksection *Template* is applicable to reducing impact sound transmission through floors using REGUPOL® acoustic underlays and systems for a range of floor finishes. NATSPEC does not have an *Acoustic floor underlay* generic worksection.

### Background

For information on sound insulation and the BCA, refer to the non-mandatory ABCB Sound insulation handbook. This sets out the objectives of the BCA, acoustic issues covered, the compliance process and options to satisfy the BCA. Appropriate design and detailing is essential particularly for flanking sound and services penetrations. The handbook includes typical details, notes on construction and recommended design practices.

Sound insulation properties need to be specified by means of the appropriate quantities which must be described using the correct terms, symbols and units. Refer to NATSPEC TECHnote DES 027 and NATSPEC TECHnote DES 032 for information on impact and airborne sound insulation.

### Guidance text

All text within these boxes is provided as guidance for developing this worksection and should not form part of the final specification. This *Guidance* text may be hidden or deleted from the document using the NATSPEC Toolbar or the hidden text *Hide* and *Delete* functions of your word processing system. For additional information visit FAQs at [www.natspec.com.au](http://www.natspec.com.au).

### Optional style text

Text in this font (blue with a grey background) covers items specified less frequently. It is provided for incorporation into *Normal* style text where it is applicable to a project.

### Related material located elsewhere in NATSPEC

If a listed worksection is not part of your subscription package and you wish to purchase it, contact NATSPEC.

Related material may be found in other worksections. See for example:

- *0471 Thermal insulation and pliable membranes* for thermal insulation to roofs and external walls.
- *0472 Acoustic insulation* for acoustic insulation to walls, partitions and ceilings.
- *0531 Suspended ceilings – combined* for acoustic ceiling tile suspended ceiling systems.
- *0621 Waterproofing – wet areas* for wet area membranes.
- *0631 Ceramic tiling*,
- *0632 Stone and terrazzo tiling*, *0651 Resilient finishes*, *0652 Carpets*,
- *0654 Engineered panel flooring* and *0655 Timber flooring* for acoustic floor underlays.

### Documenting this and related work

You may document this and related work as follows:

- Document underlays which are compatible with other components of the flooring system, particularly wet area membranes and adhesives.

The *Normal* style text of this worksection may refer to items as being documented elsewhere in the contract documentation. Make sure they are documented.

Search [acumen.architecture.com.au](http://acumen.architecture.com.au), the Australian Institute of Architects environmental advisory subscription service for notes on the following.

- Guarantees and warranties.

### Specifying ESD

REGUPOL acoustic floor underlay consists of the following sustainable product attributes:

- Recycled material content: The underlays are manufactured from materials such as recycled rubber and post-consumer cork.
- Recyclable.
- Low VOC emission content.

Refer to the NATSPEC TECHreport TR 01 on specifying ESD.

## 1 GENERAL

Regupol (Australia) Pty Ltd is the Australasian office and distribution network for the Regupol® and everroll® sustainable flooring product brands. The company has been operating in the region for over 25 years offering solution based products and technical services for all kinds of sustainable flooring and soundproofing solution based projects. The company is conveniently located at Smeaton Grange, NSW and offers nationwide distribution of the Regupol® and everroll® product lines.

### 1.1 RESPONSIBILITIES

#### General

Requirement: Provide REGUPOL® acoustic floor underlay systems, as documented.

*Documented* is defined in 0171 General requirements as meaning contained in the contract documents.

It is the responsibility of the designer to nominate and detail acoustic insulation systems conforming to the requirements of the BCA F5 for sound insulation. If the design brief calls for outcomes beyond those of the BCA, consider stating those values here or on drawings.

### 1.2 COMPANY CONTACTS

#### Regupol (Australia) technical contacts

Website: [www.regupol.com.au](http://www.regupol.com.au)

### 1.3 CROSS REFERENCES

#### General

Requirement: Conform to the following:

- 0171 General requirements.

0171 General requirements contains umbrella requirements for all building and services worksections.

List the worksections cross referenced by this worksection. 0171 General requirements references the 018 Common requirements subgroup of worksections. It is not necessary to repeat them here. However, you may also wish to direct the contractor to other worksections where there may be work that is closely associated with this work.

NATSPEC uses generic worksection titles, whether or not there are branded equivalents. If you use a branded worksection, change the cross reference here.

### 1.4 MANUFACTURER'S DOCUMENTS

#### Technical manuals

Technical information: [www.regupol.com.au](http://www.regupol.com.au)

### 1.5 INTERPRETATION

#### Definitions

General: For the purposes of this worksection the following definitions apply:

- Acoustic material: Building material with specific acoustic properties to achieve sound transmission loss, sound absorption, damping of resonance or resilience against impact noise.
- Acoustic underlay: A resilient material laid between the structural floor and the flooring material to provide sound isolation.
- Airborne sound: Sound radiated directly from a source, such as a loudspeaker or machine, into the surrounding air.
- Attenuation: The reduction of noise or vibration, by whatever method necessary, usually expressed in decibels.
- Fire hazard properties: To BCA A2.4.

- This includes the Average specific extinction area, Critical radiant flux, Flammability Index, Smoke-Developed Index, Smoke growth rate index, Smoke development rate or Spread-of-Flame Index of a material or assembly as applicable.
- See NATSPEC TECHnote DES 003 for more information on fire hazard properties of insulation and pliable membranes.

- Impact sound: Sound caused by impacts on building structure. Typical sources include footsteps, dropped objects on horizontal surfaces and the slamming of doors.
- Sound: Pressure fluctuations in air within the audible range.
- Sound absorption: The sensation perceived by the sense of hearing and the process by which sound energy is converted into heat, leading to the reduction in sound pressure level.
- Sound insulation (isolation): Reduction of sound energy passing through building elements.

- Structure-borne sound: Sound waves transmitted within the building structure and re-radiated into other spaces as airborne sound. Typical sources include direct impact from dropped objects and vibrating machinery.
- Substrate: The surface to which a material or product is applied.
- Underlay: A non-structural layer of sheet material or in situ levelling material on the substrate to provide a smooth and level surface.

Edit the **Definitions** subclause to suit the project or delete if not required. List alphabetically.

## 1.6 SUBMISSIONS

### Fire hazard properties

General: Submit evidence of conformance to **PRODUCTS, INSULATION MATERIALS, Fire hazard properties**.

### Products and materials

Product data: Submit the manufacturer's data for each type of underlay, and the manufacturer's recommendations for its application in the project including, if relevant, the following:

- Thickness and width of sheet or size of tile.
- Adhesive method specification approved by manufacturer.

### Samples

Range: Submit labelled samples of underlays illustrating the product code or range of the product.

Minimum size per sample:

- Sheet: 450 x 450 mm.
- Tiles: A whole tile or 0.09 m<sup>2</sup>, whichever is the greater.

Identification: Label each sample, with brand, product name, and manufacturer's code reference (including the code for each coat of multi-coat work).

**Sample panels: Provide sample panels as follows:**

- Location: [complete/delete]
- Size (mm): [complete/delete]

### Subcontractors

General: Submit names and contact details of proposed suppliers and installers.

**Evidence of experience:** [complete/delete]

Delete if supplier/installer details are not required.

### Tests

0171 *General requirements* covers tests in **Definitions** and calls for an inspection and testing plan under **SUBMISSIONS, Tests**.

Type tests: Submit results, as follows:

**Weighted normalized impact sound pressure level  $L_{n,w}$  to AS ISO 717.2:** [complete/delete]

A single-number rating, expressed in decibels, of laboratory measured frequency dependent impact sound insulation of a floor/ceiling assembly using a standardized tapping machine. It is determined by reference to AS ISO 717.2 from measurements of normalized impact sound pressure level made in accordance with AS ISO 140.6 over the third-octave band frequency range 100-3150Hz.

Type tests are carried out off-site. However, submission of evidence of a successful type test may be called up here for requirements specified in **SELECTIONS** or **PRODUCTS**, if there are no **SELECTIONS**.

Other tests: Submit results, as follows:

Detail the tests required in **PRODUCTS** or **EXECUTION**, as appropriate, and list the submissions required here.

**Weighted standardized impact sound pressure level  $L'_{nT,w}$  to AS ISO 717.2:** [complete/delete]

A single-number rating, expressed in decibels, of the field measurement of frequency dependent impact sound insulation between rooms in buildings. It is determined by reference to AS ISO 717.2 from measurements of standardized impact sound pressure level made in accordance with AS/NZS ISO 140.7 over the third octave band frequency range 100-3150Hz.

Site testing is expensive. Delete if not appropriate. See NATSPEC TECHnote DES 027 for information on the options available for BCA compliance.

### Warranties

General: Register project warranty with manufacturer and submit for each product and application.

Requirement: Submit the following:

- [complete/delete]

Describe the requirements of warranties in **PRODUCTS** or **EXECUTION**, as appropriate, and list the submissions required here.

## 1.7 INSPECTION

### Notice

Inspection: Give notice so that inspection may be made of the following:

- Substrate immediately before fixing the underlay.
- Installed underlay before it is covered up or concealed.
- Completed installation.

Amend to suit the project, adding critical stage inspections required.

**Hold points**, if required, should be inserted here.

## 2 PRODUCTS

### 2.1 GENERAL

#### Product substitution

Other products: Conform to **PRODUCTS, GENERAL, Substitutions** in *0171 General requirements*.

The *0171 General requirements* clause sets out the submissions required if the contractor proposes alternative products. Refer also to NATSPEC TECHnote GEN 006 for more information on proprietary specification.

#### Marking

Identification: Marked to show the following:

- Manufacturer's identification.
- Product brand name.
- Product type.
- Quantity.
- Product reference code and batch number.
- Date of manufacture.

Edit the list to suit the project or delete if not required.

### 2.2 INSULATION MATERIALS

#### Fire hazard properties

See NATSPEC TECHnote DES 003 for more information on fire hazard properties of insulation and pliable membranes.

Critical radiant flux: As determined by AS ISO 9239.1.

Non-sprinklered buildings: The floor finish must have maximum *smoke development rate* of 750 percent-minutes tested to AS ISO 9239.1.

Regupol underlays have been tested to AS ISO 9239.1 as a component of a floor system only. Test specimens for AS ISO 9239.1 must include the proposed floor finish, substrate, underlays and adhesives (if used) and be representative of the flooring in its end use.

If smoke development rate is required, request testing of the proposed floor system to AS ISO 9239.1 here or in the relevant floor finishes worksection.

Refer to NATSPEC TECHnote DES 020 for further information on fire hazard properties.

#### VOC limits

Total VOC limit:

- Generally: 0.5 mg/m<sup>2</sup>.

Limiting VOC levels to the above limit can earn credit points for the Green Star – Office Design v3 scheme. Delete if not required.

#### Adhesives

General: To REGUPOL recommendations and compatible with the substrate and the applied flooring material.

## Sealants

Acoustic sealant: Elastic, water based, high performing, non-hardening sealant that maintains high acoustic performance in floors and walls.

Alternatives: Fire-resisting sealants are claimed to satisfy most acoustic properties.

Fire-resisting: Non-hardening sealant compatible with the host materials and having a fire-resistance level equal to that of the floor it seals.

Sealant strips: Closed cell resilient foam.

## 2.3 REGUPOL ACOUSTIC FLOOR UNDERLAYS

### REGUPOL® K225

Description: Styrene butadiene rubber (SBR) and cork particles, rebounded with polyurethane binder.

Application: A soundproofing acoustic underlay manufactured from recycled SBR rubber granulates and cork, bound with polyurethane. The product composition produces an effective acoustic barrier to install parquet and timber floors directly to the surface finish. The cork and rubber combination provides excellent cohesion between the polyurethane adhesive, the acoustic underlay and the timber floor. The product is available in rolls and modular tiles for fast installation.

#### Product Data

Roll length: 20 lineal metres.

Roll width: 1000 mm.

Modular tiles: 1050 x 500 mm.

Thickness: 5 mm.

### REGUPOL® 4515

Description: Polyurethane bonded cork particles and polyurethane foam.

Application: A soundproofing acoustic underlay manufactured from high quality PUR foam granulates and cork, bound with polyurethane. The unique material composition offers excellent cohesion qualities making it a preferred material choice for approved direct fix installations of ceramic tiles, stone and marble floors. The product is light weight and suitable for use with under floor heating systems. The product is available in rolls and modular tiles for fast installation.

#### Product Data

Roll length: 20 lineal metres.

Roll width: 1000 mm.

Modular tiles: 1050 x 500 mm.

Thickness: 4.5 mm and 9 mm.

Note: When installing tiles over 9 mm thickness the tile size should be 300 x 300 mm and above in size.

### REGUPOL® 4515-S (Sanded)

Description: Polyurethane bonded cork particles and polyurethane foam.

Application: A soundproofing acoustic underlay manufactured from high quality PUR foam granulates and cork, bound with polyurethane. The unique material composition allows the acoustic underlay to be compatible with PVC flooring and will not cause plasticizer migration. The sanded finish and smooth texture of the underlay enables the approved resilient flooring to be installed directly to the underlay, without the need for separation layers. The product is Good Environmental Choice Australia certified for its environmental contribution. The product is available in rolls.

#### Product Data

Roll length: 20 lineal metres.

Roll width: 1000 mm.

Thickness: 3 mm.

### REGUPOL® 6015 and 6010

Description: Selected recycled rubber particles bounded together with a highly elastic polyurethane binder.

Application: The Regupol® 6015 and 6010 is a range of soundproofing acoustic underlays manufactured from recycled SBR rubber granulates, bound with polyurethane. The underlay's are manufactured to a specific density and finished in either a flat sheet or a 3-D dimple profile. The finished product is technically superior when it comes to solid T&G, plywood and heavy duty screed beds. The 3-D dimple profile allows the impact sound generated to dissipate and reduce. All products are available in rolls and modular tiles for fast installation.

#### Product Data

Roll length: Varies 10 and 20 lineal metres.

Roll width: Varies 1150 mm and 1250 mm.

Thickness: 5 mm, 8 mm, 10 mm and 15 mm in flat sheet profile. 6/3 mm dimple, 8/4 mm dimple and 17/8 mm dimple.

6/3 mm has a 6 mm nominal thickness and a 3 mm dimpled surface on one side.

8/4 mm has an 8 mm nominal thickness and a 4 mm dimpled surface on one side.

17/8 mm has a 17 mm nominal thickness and an 8 mm dimpled surface on one side.

### 3 EXECUTION

#### 3.1 PREPARATION

Delete substrate preparation if documented in the relevant flooring worksection and add cross reference to worksection clause.

##### Substrates

General: To AS 1884 Section 3.

##### Substrate tolerance table

| Property    | Length of straight edge laid in any direction | Max. deviation under the straight edge |
|-------------|---|--|
| Planeness   | 2 m   | 4 mm                                   |
| Smoothness  | 150 mm  | 1 mm                                   |
| Projections | 50 mm   | 0.5 mm                                 |

Planeness tolerance class: Nominate Class A in the **Flatness tolerance class table** in the 0315 Concrete finishes and 0612 Cementitious toppings worksections to resilient finishes locations as appropriate for the project. It is assumed smoothness and projection tolerance corrections form part of substrate preparation.

##### Concrete substrates

Refer to NATSPEC TECHnote DES 008 on the preparation of concrete substrates.

Surface pH: ≤ 10 when tested to AS 1884 Appendix B and compatible with the adhesive.

Testing of pH should be carried out after any surface grinding. Freshly exposed concrete has high alkalinity and problems have been encountered overseas.

Moisture content: Do not commence installation unless the moisture content of the concrete has been tested to AS 1884 Appendix A and the values in clause A3.1.2 or A3.1.3 have been obtained.

Surface treatments: Mechanically remove the following surface treatments:

- Sealers and hardeners.
- Curing compounds.
- Waterproofing additives.
- Surface coatings and contamination.

Concrete substrate correction: Remove projections and fill voids and hollows with a levelling compound compatible with the adhesive. Allow filling or levelling compound to dry to manufacturer's recommendations.

Cleaning: Remove loose materials or dust.

##### Timber and plywood substrates

Moisture content: Do not commence installation unless the moisture content of battens/joists or plywood substrate has been tested to AS/NZS 1080.1 for timber and AS/NZS 2098.1 for plywood and values obtained as follows:

- Air conditioned buildings: 8 to 10%.
- Intermittently heated buildings: 10 to 12.5%.
- Unheated buildings: 12 to 15%.

Timber substrate correction: Remove projections. If conformance to the **Substrate tolerance table** cannot be achieved, provide an underlay in brick pattern with joints avoiding substrate joints.

Cleaning: Remove oil, grease, traces of applied finishes and loose materials or dust.

##### Storage

General: Store horizontally and keep dry.

**Working environment**

General: Do not start work before the building is enclosed, wet work is complete and dry, and good lighting is available. Protect adjoining surfaces.

**Conditioning**

General: Stabilise the room temperature for seven days prior to, and two days after, installation of floor finishes, as follows:

- Areas with air conditioning installed: Run air conditioning at operational temperature.
- Air conditioned areas not operational: Maintain an ambient room temperature range of 15°C to 28°C.
- Non-air conditioned areas: Install at an ambient room temperature range of 15°C to 28°C.
- Underfloor heating: Turn off heating and allow background to stabilise at the temperature recommended by the manufacturer.

Sheet underlay: Expose both faces of each sheet of underlay for at least 24 hours before fixing.

REGUPOL® acoustic floor underlay acclimatisation: Unroll the underlay and cut to length, allowing extra length for pull back. Allow all cut lengths to relax and acclimatise for up to 24 hours.

This process allows for dimensional relaxation and temperature equilibration to the room conditions.

**3.2 INSTALLATION****REGUPOL acoustic underlay**

General: To REGUPOL's recommendations.

**3.3 FLANKING SOUND INSULATION**

To preserve the sound reduction properties of the floor system, seal the flanking sound transmission paths during installation, including junctions between partitions and other building surfaces, air gaps, recesses and cut-outs for services.

**Penetrations**

Ductwork and piping: [complete/delete]

Delete if not appropriate.

The 0171 General requirements worksection calls for the maintenance of the acoustic rating of the penetration. Delete if not appropriate.

**Abutments**

The insulation of flanking sound at abutments is project specific and relies on details, particularly at partition junctions to window mullions that may be subject to horizontal deflection movements

Seal:

- Strip: [complete/delete]
- Sealant: [complete/delete]

e.g. Closed cell foam strips and gunned acoustic sealant.

Trims: [complete/delete]

e.g. Project specific skirting section to protect the sealant and allow movement.

**4 SELECTIONS**

**Schedules** are a way of documenting a selection of proprietary or generic products or systems by their properties. Indicate their locations here and/or on the drawings. Refer to NATSPEC TECHnote GEN 024 for guidance on using and editing schedules.

**4.1 REGUPOL SCHEDULES**

Each of the following subheadings covers the REGUPOL acoustic treatment associated with a final floor finish. Delete those not required for the project.

Refer to NATSPEC TECHnote DES 027 for information on impact sound insulation.

**REGUPOL® 4515 Acoustic floor insulation – Direct fix ceramic, stone, marble tiling system**

Location: [complete/delete]

Describe, or refer to a Finishes Schedule.

Substrate: [complete/delete]

e.g. concrete slab, plywood flooring, floorboards with fibre cement underlay.

Product: REGUPOL® 4515 Impact Sound Acoustic Underlay.

Thickness: [complete/delete]

Select 4.5 mm or 9 mm. Refer to REGUPOL for advice on the most appropriate thickness. Not less than 300 x 300 mm in size, for 9 mm thick Regupol 4515 tiles.

Installation method: Direct fix using manufacturers specified systems and warranted adhesives, screed additives and flexible grouting systems.

Primer: [complete/delete]

For porous substrates select from:

- Regupol Primer 444 for dry areas.
- Regupol Two Part Water Based Epoxy Sealer for wet areas.

Underlay adhesive: [complete/delete]

Select from:

- Regupol One Part Multi-Use Flooring Adhesive for internal dry areas.
- Regupol One Part Polyurethane Adhesive for wet areas and external applications.

For wet area applications install an approved waterproof membrane on the substrate and over the acoustic underlay.

Tiles should be installed over the acoustic underlay with an approved compatible tile adhesive and grouting system.

Confirm with all manufacturers to make sure of compatibility of selected tiles with the underlay and adhesive/s.

### **REGUPOL® 4515-S Acoustic floor insulation – Resilient finishes dual bond system**

Location: [complete/delete]

Describe, or refer to a Finishes Schedule.

Substrate: [complete/delete]

e.g. concrete slab, particleboard flooring, floorboards with fibre cement or hardboard underlay.

Product: REGUPOL® 4515-S Impact Sound Acoustic Underlay.

Thickness: 3 mm.

Installation method: Direct stick dual bond using the manufacturer's specified systems and warranted adhesives.

Primer: [complete/delete]

For porous substrates select from:

- Regupol Primer 444 for dry areas.
- Regupol Two Part Water Based Epoxy Sealer for wet areas.

Underlay adhesive: [complete/delete]

Select from:

- Regupol Resilient One Part Adhesive for dry areas and for dual bonding of the approved resilient floor covering to the REGUPOL® 4515-S internal areas.
- Regupol Resilient Two Part Polyurethane Adhesive for wet areas and for dual bonding of the approved resilient floor covering to the REGUPOL® 4515-S for wet areas.

Confirm with all manufacturers to make sure of compatibility of selected resilient finish flooring with the adhesive/s.

### **REGUPOL® 6015 and 6010 Acoustic floor insulation – Bonded screed system**

Location: [complete/delete]

Describe, or refer to a Finishes Schedule.

Substrate: [complete/delete]

e.g. concrete slab.

Product: REGUPOL® 6015 and 6010 Impact Sound Acoustic Underlay.

Thickness: [complete/delete]

Select 5 mm, 6/3 mm dimple or 8 mm 8/4mm dimple, 10mm, 15mm and 17/8. Refer to REGUPOL for advice on the most appropriate thickness.



Installation method: To REGUPOL's recommendations, using the manufacturer's specified systems and warranted adhesives, screed additives and flexible grouting systems.

Primer: [complete/delete]

For porous substrates select from:

- Regupol Primer 444 for dry areas.
- Regupol Two Part Water Based Epoxy Sealer for wet areas.

Underlay adhesive: [complete/delete]

Select from:

- Regupol One Part Multi-Use Flooring Adhesive for internal dry areas.
- Regupol One Part Polyurethane Adhesive for wet areas and external applications.

For wet area applications install an approved waterproof membrane on the substrate and over the screed.

For bonded screed applications use an approved polymer additive in the screed application. Make sure the minimum bonded screed height is as per Regupol's recommendations.

Tiles should be installed over the screed with an approved compatible tile adhesive and grouting system.

Confirm with the manufacturer, to make sure of compatibility of selected tiles with the underlay and adhesive/s.

### **REGUPOL® 6015 and 6010 Acoustic floor insulation – Engineered timber flooring**

Location: [complete/delete]

Describe, or refer to a Finishes Schedule.

Substrate: [complete/delete]

e.g. concrete slab, particleboard flooring, floorboards.

Product: REGUPOL® 6015 and 6010 Impact Sound Acoustic Underlay.

Thickness: 5 mm, 6/3 mm, dimple, 8 mm, 8/4 mm dimple, 10 mm, 15 mm and 17/8 mm dimple.

Primer: To REGUPOL's recommendations.

Floating timber flooring installation method: [complete/delete]

Engineered timber can be loose-laid over the underlay or dual bonded to the underlay using an approved adhesive. Some dimpled products will require the installation of a plywood substrate to separate the engineered timber floor from the acoustic underlay. Refer to REGUPOL for advice on the most appropriate thickness and correct installation detail.

### **REGUPOL® 6015 and 6010 Acoustic floor insulation – T&G Timber strip flooring over plywood**

Location: [complete/delete]

Describe, or refer to a Finishes Schedule.

Substrate: [complete/delete]

Product: REGUPOL® 6015 and 6010 Impact Sound Acoustic Underlay.

Thickness: [complete/delete]

Select 5 mm, 6/3 mm, dimple or 8 mm 8/4 mm dimple, 10 mm, 15 mm and 17/8 mm dimple underlay. Refer to REGUPOL for advice on the most appropriate thickness.

Primer: To REGUPOL's recommendations.

Installation method: To REGUPOL's recommendations using manufacturers specified systems and warranted adhesives.

### **REGUPOL® K225 Acoustic floor insulation – Parquet flooring**

Location: [complete/delete]

Describe, or refer to a Finishes Schedule.

Substrate: [complete/delete]

e.g. concrete slab, particleboard flooring, floorboards.

Product: REGUPOL® K225 Impact Sound Acoustic Underlay.

Thickness: 5 mm.

Primer: To REGUPOL's recommendations.

Installation method: To REGUPOL's recommendations using manufacturers specified systems and warranted adhesives.

Underlay adhesive: REGUPOL One Part Polyurethane Adhesive.

Parquet flooring adhesive: REGUPOL One Part Polyurethane Adhesive.

**REGUPOL® K225 Acoustic floor insulation – Engineered timber flooring and bamboo flooring**

Location: [complete/delete]

Describe, or refer to a Finishes Schedule.

Substrate: [complete/delete]

e.g. concrete slab, particleboard flooring, floorboards.

Product: REGUPOL® K225 Impact Sound Acoustic Underlay.

Thickness: 5 mm.

Primer: To REGUPOL's recommendations.

Installation method: To REGUPOL's recommendations using manufacturers specified systems and warranted adhesives.

Engineered timber and bamboo can be loose laid over the underlay or dual bonded to the underlay using an approved adhesive.

Underlay adhesive:

Loose-laid bamboo or engineered timber: Regupol One Part Polyurethane Adhesive.

- Dual bonded bamboo or engineered timber: Regupol One Part Polyurethane Adhesive.

**REGUPOL® K225 Acoustic floor insulation – Timber strip flooring and timber flooring over plywood**

Location: [complete/delete]

Describe, or refer to a Finishes Schedule.

Substrate: [complete/delete]

Product: REGUPOL® K225 Impact Sound Acoustic Underlay.

Thickness: 5 mm.

Primer: To REGUPOL's recommendations.

Installation method: To REGUPOL's recommendations using manufacturers specified systems and warranted adhesives.

Underlay adhesive: Regupol One Polyurethane Adhesive.

Timber strip flooring and plywood adhesive: Regupol One Part Polyurethane Adhesive to bond plywood to the underlay, and to bond T&G strip timber flooring to the plywood.

**REFERENCED DOCUMENTS**

The following documents are incorporated into this worksection by reference:

|               |      |   |
|---------------|------|---|
| AS ISO 717    |      | Acoustics - Rating of sound insulation in buildings and of building elements        |
| AS ISO 717.2  | 2004 | Impact sound insulation   |
| AS/NZS 1080   |      | Timber - Methods of test  |
| AS/NZS 1080.1 | 2012 | Moisture content  |
| AS 1884       | 2012 | Floor coverings - Resilient sheet and tiles - Installation practices                |
| AS/NZS 2098   |      | Methods of test for veneer and plywood  |
| AS/NZS 2098.1 | 2006 | Moisture content of veneer and plywood  |
| AS ISO 9239   |      | Reaction to fire tests for floor coverings  |
| AS ISO 9239.1 | 2003 | Determination of the burning behaviour using a radiant heat source                  |
| BCA A2.4      | 2016 | General Provisions - Acceptance of design and construction - Fire hazard properties |

The following documents are mentioned only in the *Guidance* text:

|                  |      |   |
|------------------|------|---|
| AS ISO 140       |      | Acoustics - measurement of sound insulation in buildings and of building elements |
| AS ISO 140.6     | 2006 | Laboratory measurements of impact sound insulation of floors                      |
| AS/NZS ISO 140.7 | 2006 | Field measurements of impact sound insulation of floors (ISO 140-7:1998, MOD)     |
| ABCB Sound       | 2016 | Sound insulation handbook   |
| BCA F5           | 2016 | Health and amenity - Sound transmission and insulation                            |
| NATSPEC DES 003  | 2006 | Fire hazard properties of insulation and pliable membranes                        |
| NATSPEC DES 008  | 2015 | Preparation of concrete substrates  |
| NATSPEC DES 020  | 2011 | Fire behaviour of building materials and assemblies                               |
| NATSPEC DES 027  | 2016 | Impact sound insulation   |
| NATSPEC DES 032  | 2014 | Airborne sound insulation   |
| NATSPEC GEN 006  | 2007 | Product specifying and substitution   |
| NATSPEC GEN 024  | 2015 | Using NATSPEC selections schedules  |
| NATSPEC TR 01    | 2016 | Specifying ESD  |