

## 0473P DAMTEC 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 BCA compliant DAMTEC underlays for all floor finishes.

### 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 for information on impact sound insulation and NATSPEC TECHnote DES 032 for information on 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* and 0652 *Carpets*.
- 0654 *Engineered panel flooring* and 0655 *Timber flooring* for acoustic floor underlays.

### Material not included in NATSPEC

Some projects may include items not covered by NATSPEC. For these you may need to create new text or modify this text or a suitable worksection. For example:

- Acoustic isolation beyond the normal requirements of commercial and domestic uses, such as broadcasting studios or heavy industrial applications.
- Acoustic lining applied as a surface treatment and suspended acoustic batters used to minimise sound transmission and/or reflection.

### Documenting this and related work

You may document this and related work as follows:

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

### Specifying ESD

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

- The underlays are manufactured from recycled rubber granules.
- Recyclable.
- Low VOC emission content.

Refer to the NATSPEC TECHreport TR 01 on specifying ESD.

## 1 GENERAL

DAMTEC is part of the KRAIBURG Group (Est. 1947), an organisation rich in tradition with over 2000 employees worldwide and an annual sales volume of approximately AUD 500 million. They are an internationally acknowledged and recognised manufacturer of ready-to-install products for impact sound reduction.

### 1.1 RESPONSIBILITIES

#### General

Requirement: Provide 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 floor, wall and ceiling systems containing acoustic insulation to the requirements of the BCA for sound insulation. If the design brief calls for outcomes beyond those of the BCA, document in the relevant worksection or on the drawings.

### 1.2 COMPANY CONTACTS

#### DAMTEC technical contacts

Website: [www.damtec.com.au/contact-us](http://www.damtec.com.au/contact-us).

### 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

DAMTEC Product Data-Sheets, Safety Data Sheets and installation instructions: [www.damtec.com.au](http://www.damtec.com.au).

General brochure: [www.damtec.com.au/files/uploaded/DAMTEC\\_Brochure\\_080226.pdf](http://www.damtec.com.au/files/uploaded/DAMTEC_Brochure_080226.pdf).

#### Additional documents

Requirement: Conform to DAMTEC installation manuals and details.

### 1.5 INTERPRETATION

#### Definitions

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

- Acoustic insulation: Materials or methods of construction to reduce the transmission of airborne and structure-borne sound through floors, walls and ceilings or other enclosing elements in buildings.
- 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.
- 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.

- Fibre batts: Flexible insulation supplied as factory cut pieces and composed of mineral wool (glass and rock fibre) or polyester fibre.
- FBS-1 (fibre-bio-soluble) mineral wool: Insulation composed of bio-soluble glass or rock fibres.

- Impact sound: Sound caused by impacts on building structure. Typical sources include footsteps, dropped objects on horizontal surfaces and the slamming of doors.
- 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.

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**.

### Samples

General: Submit one sample of each underlay.

### Warranties

DAMTEC warranties: Submit on completion.

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 inspection may be made of the insulation installed before it is covered up or concealed.

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.

### 2.2 INSULATION MATERIALS

#### Fire hazard properties

See NATSPEC TECHnote DES 003 for more information on fire hazard properties of insulation materials.

Fire hazard indices for all materials: Conform to the following tested to AS/NZS 1530.3:

- Spread-of-Flame Index:  $\leq 9$ .
- Smoke-Developed-Index:  $\leq 8$  if Spread-of-Flame Index  $> 5$ .

Note that AS/NZS 1530.3 clause 4.12.2 (c) requires three test specimens of laminated reflective surface materials to incorporate a vertical joint.

Critical radiant flux: To BCA Spec C1.10 tested to 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.

Contact DAMTEC for product test reports.

**Non-combustible construction required: [complete/delete]**

Note any parts of the project that the BCA requires to be non-combustible. The BCA requires that construction required to be non-combustible (e.g. fire walls and spandrels with a specific FRL) must be constructed wholly of materials that are not deemed combustible. In other situations the BCA does not prohibit the use of combustible insulation materials provided they meet the other fire properties.

#### VOC limits

Total VOC limit: 0.5 mg/m<sup>2</sup> generally.

DAMTEC acoustic underlay products are low VOC emitting. Contact DAMTEC for product test reports.

### Sealants

Acoustic sealant: Non-hardening sealant compatible with the adhering surface material, with specific gravity of 1.5 gm/cm<sup>3</sup> minimum.

Alternatives: Fire-resisting sealants may satisfy most acoustic properties.

Fire-resisting: Non-hardening sealant compatible with the adhering surface material, with fire-resistance level equal to that of the partition it seals.

Sealant strips: Closed cell resilient foam.

## 2.3 DAMTEC ACOUSTIC FLOOR UNDERLAYS

### General

Description: DAMTEC products are engineered and manufactured using high quality rubber granules, recycled from the medical and automotive industries, and natural cork bound together by high grade polymers and mass produced under ISO 9001 Quality Management Systems.

DAMTEC acoustic underlay products are suitable for all floor finish applications and provide significant reductions in impact noise through floors between habitable rooms.

Various DAMTEC products have been tested to all relevant international standards and have been shown to significantly reduce the impact of footfall noise.

Compliance: DAMTEC products meet the Deemed-to-Satisfy BCA F5 provisions and have been tested to AS ISO 140, with results calculated to AS ISO 717.2, as required by BCA F5.3.

DAMTEC has conducted extensive laboratory testing on a typical concrete slab (140 mm thick) with no ceiling, to AS ISO 140. The results calculated are to AS ISO 717.2 (as required by the BCA) for all acoustic systems that are accredited, and meet the Deemed-to-Satisfy provisions of the BCA F5. They have also conducted numerous on-site field tests in Australia. All laboratory and field tests are available upon request.

### DAMTEC® Standard

Description: An impact sound insulation underlay, comprising of fine granules of recycled rubber and cork, with polyurethane elastomer bonding agent suitable for use under all tile, timber and carpet floor finishes.

Width: 1000 mm.

Thicknesses: 2 mm, 3 mm and 4 mm.

### DAMTEC® Estra

Description: An impact sound insulation underlay, comprising of granules of recycled rubber, with polyurethane elastomer bonding agent for use in floating screed/concrete slab systems or under rigid floor elements on timber subfloors. This product has high dynamic rigidity qualities.

Width: 1250 mm.

Thicknesses: 4 mm.

### DAMTEC® Color

Description: An impact sound insulation underlay specifically formulated with granules of recycled medical grade rubber and cork, with polyurethane elastomer bonding agent suitable for use under timber, carpet and all resilient floor finishes.

Width: 1000 mm.

Thicknesses: 2 mm, 3 mm and 4 mm.

### DAMTEC® System

Description: A high specification impact sound insulation underlay for exceptional applications demanding very high performance.

Contact DAMTEC for further details.

## 2.4 ADHESIVES

### Standards

Ceramic, stone and terrazzo tiling: To AS ISO 13007.1.

Carpet: To AS/NZS 2455.1.

**Type**

Requirement: Provide adhesives, compatible with the adhering surface materials, to **DAMTEC INSULATION SELECTION**.

Prohibited uses: Do not provide the following combinations:

- Cement-based adhesives on wood, metal or painted surfaces.
- Organic solvent-based adhesives on painted surfaces.
- Organic PVC-based adhesives and organic natural rubber latex adhesives in damp or wet conditions.
- PVA (polyvinyl acetate) based adhesives in wet areas or externally.

Select the adhesive in consultation with DAMTEC on the correct application and service conditions. If a warranty is required, it is important that all aspects of the acoustic floor underlay installation become the responsibility of the warrantor. Specification by proprietary item (brand name and manufacturer) will usually be the most certain method of getting the right formulation for a particular purpose.

Specify the adhesive type for each application under **DAMTEC INSULATION SELECTION** for the appropriate material, either generically (e.g. Acrylic-based adhesive) or as a proprietary item.

**3 EXECUTION****3.1 GENERAL****Installation**

Requirement: Install all DAMTEC products to DAMTEC's recommendation.

**3.2 PREPARATION****Substrates**

Drying and shrinkage: Allow at least 21 days to elapse (for initial drying out and shrinkage), after toppings are placed before fixing floor tiles.

Standard: To AS 3958.1 Section 4.

**Substrate tolerance table**

Property	Length of straightedge laid in any direction	Max. deviation under the straightedge
Flatness Class A	3 m	3 mm
Smoothness	150 mm	1 mm
Projections	50 mm	0.5 mm

Flatness tolerance class: Nominate Class A in the 0315 Concrete finishes and 0612 Cementitious toppings worksections, to resilient finishes locations appropriate for the project.

It is assumed smoothness and projection tolerance corrections form part of substrate preparation.

Cleaning concrete surfaces: Mechanically remove the following surface treatments:

- Sealers and hardeners.
- Curing compounds.

Cleaning timber surfaces: Remove oil, grease and traces of applied finishes.

Concrete substrate correction: Remove projections and fill voids and hollows with a levelling compound compatible with the adhesive.

Freshly exposed concrete has high alkalinity and problems have been encountered overseas.

Consider including the following *Optional text*:

Freshly exposed concrete: If raised areas are corrected by grinding, test the freshly exposed concrete surface for pH, and obtain verification of compatibility with the adhesive.

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

If sheet underlay is required, import the **FIXING UNDERLAY** clause from the 0631 Ceramic tiling, 0632 Stone and terrazzo tiling or 0655 Timber flooring worksections, as appropriate.

Moisture content: Do not commence installation unless:

- Concrete: The moisture content of the concrete has been tested to AS/NZS 2455.1 Appendix B and the values in clause 2.4.2 (c) have been obtained.
- Plywood and timber: The moisture content of battens/joists or plywood background has been tested to AS/NZS 1080.1 and values obtained conform to the following:
  - . Air conditioned buildings: 8 to 10%.
  - . Intermittently heated buildings: 10 to 12.5%.
  - . Unheated buildings: 12 to 15%.

Refer to NATSPEC TECHnote DES 008 for preparation of concrete substrates.

### 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 room temperature range of 18°C to 30°C.
- Underfloor heating: Turn off heating and allow background to stabilise at the temperature recommended by the floor finish manufacturer.
- Non-air conditioned areas: Install at 18°C to 30°C.

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

DAMTEC acoustic floor underlay storage: Store horizontally and keep dry.

DAMTEC acoustic floor underlay conditioning: Roll out, loose lay and butt joint the underlay. Make sure it is slightly larger than the area to be covered. Loose lay the underlay perpendicular to the direction of the final floor finish. Leave the underlay in place for minimum 12 hours, to allow the underlay to acclimatise and relax (allow internal stresses to dissipate). Allow 50 mm extra material to run up the walls at the perimeter of the space, so that underlay can be trimmed to the exact size after the relaxation period.

This initial process is vital, as it allows for dimensional relaxation and temperature equilibration to the room condition.

## 3.3 INSTALLATION

### DAMTEC acoustic underlay – adhesive fixed systems

Trimming: At the end of the material relaxation period, trim the underlay to the exact dimensions of the area covered with a straightedge and sharp knife.

Adhesive application: Apply as follows:

- Pull back a panel of underlay to about halfway, trowel adhesive with a 2.4 mm V-Notch trowel onto the substrate to the manufacturer's recommendations.
- Lay the underlay carefully onto the adhesive whilst still wet.
- Move to the opposite end of the panel and carry out the same process. Once the first panel is complete, move onto the next adjacent panel, check that each panel is tightly butted to the other with no overlaps or gaps.

Working method: Begin bonding the underlay from the part of the room furthest from the entry, and to work back towards the entry to minimise the need to step on the installation once completed.

### DAMTEC acoustic underlay – loose laid systems

Trimming: At the end of the material relaxation period, run the underlay 50 mm up the wall. Cut the upstand at the floor/wall junction and leave a strip of underlay against the wall. Butt underlay on wall and floor together to form a square junction. After installation of floor finishes, trim the underlay flush with the finished floor level with a straightedge and sharp knife.

Membrane installation (for under screed applications): Install as follows:

- Loose lay polyethylene sheet at least 0.2 mm thick over the entire area of underlay, including the upturns/isolation strips to the wall.
- Overlap sheets without gaps so that any in situ screed placed on it does not penetrate the acoustic underlay and make contact with the substrate, potentially creating sound bridges.

- After installation of floor finishes, trim membrane and underlay flush with the finished floor level with a straightedge and sharp knife. Seal gap between flooring and walls with sealant.

If only one fixing method is used, delete the one not required.

Working method: Begin installation of the underlay from the part of the room furthest from the entry, and work back towards the entry to minimise stepping on the completed installation.

### 3.4 FLANKING SOUND INSULATION

To preserve the sound reduction properties of  $R_w$  rated partitions, seal the flanking sound transmission paths during installation, including junctions between partitions and other building surfaces, air gaps around doorsets, recesses, such as pelmets and blind boxes and cut-outs for services.

#### Penetrations

Ductwork and piping: [complete/delete]

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.

#### Seals:

- 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 DAMTEC INSULATION SELECTION

Each of the following subheadings covers the DAMTEC 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.

PDFs and CAD details of the following systems are available upon becoming a DAMTEC member. Visit [www.damtec.com.au](http://www.damtec.com.au) for membership.

#### DAMTEC Acoustic floor insulation – Ceramic tiling

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: DAMTEC Standard.

Thickness: [complete/delete]

Select 2 mm or 3 mm. Refer to DAMTEC for advice on the most appropriate thickness.

Installation method: Direct stick.

Underlay adhesive: [complete/delete]

#### Select:

- Acrylic-based adhesive for dry areas.
- One-part polyurethane adhesive for wet areas and external applications. For these applications DAMTEC also recommend the installation of a flexible cementitious waterproofing membrane on top of the DAMTEC acoustic underlay. Confirm the suitability of the adhesive for these applications with the manufacturer before specifying.

Some manufacturers also allow the use of some of their acrylic-based adhesives for fixing DAMTEC acoustic underlays to the substrate for wet area applications but confirm their suitability for these applications with the manufacturer before specifying.

Ceramic tile adhesive: Cementitious based thin-bed tile adhesive recommended by the manufacturer as suitable for use directly on top of the DAMTEC acoustic underlay for dry areas and on top of cured waterproofing membrane for wet areas.

Consult with the manufacturer about the possible use of a latex additive with the adhesive.

### **DAMTEC Acoustic floor insulation – Stone and terrazzo tiling**

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: DAMTEC Standard.

Thickness: [complete/delete]

Select 2 mm or 3 mm. Refer to DAMTEC for advice on the most appropriate thickness.

Installation method: Direct stick.

Underlay adhesive: [complete/delete]

Select:

- Acrylic-based adhesive for dry areas.
- One-part polyurethane adhesive for wet areas and external applications. For these applications DAMTEC also recommend the installation of a flexible cementitious waterproofing membrane on top of the DAMTEC acoustic underlay. Confirm the suitability of the adhesive for these applications with the manufacturer before specifying.

Some manufacturers also allow the use of some of their acrylic-based adhesives for fixing DAMTEC acoustic underlays to the substrate for wet area applications but confirm their suitability for these applications with the manufacturer before specifying.

Stone and terrazzo tile adhesive: Cementitious based thin-bed tile adhesive recommended by the manufacturer as suitable for use directly on top of the DAMTEC acoustic underlay for dry areas and on top of cured waterproofing membrane for wet areas.

Consult with the manufacturer about the possible use of a latex additive with the adhesive.

### **DAMTEC Acoustic floor insulation – Resilient finishes**

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: DAMTEC Color.

Thickness: [complete/delete]

Select 2 mm or 3 mm. Refer to DAMTEC for advice on the most appropriate thickness.

Installation method: Direct stick.

Underlay adhesive: [complete/delete]

Select:

- Acrylic-based adhesive for dry areas.
- One-part polyurethane adhesive for wet areas and external applications. For these applications DAMTEC also recommend the installation of a flexible cementitious waterproofing membrane on top of the DAMTEC acoustic underlay. Confirm the suitability of the adhesive for these applications with the manufacturer before specifying.

Some manufacturers also allow the use of some of their acrylic-based adhesives for fixing DAMTEC acoustic underlays to the substrate for wet area applications but confirm their suitability for these applications with the manufacturer before specifying.

Resilient finish adhesive: Two-part polyurethane adhesive recommended by the manufacturer as suitable for use on top of the DAMTEC acoustic underlay.

### **DAMTEC Acoustic floor insulation – Carpets**

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: [complete/delete]

Select DAMTEC Standard or Color.

Thickness: [complete/delete]

Select 2 mm or 3 mm. Refer to DAMTEC for advice on the most appropriate thickness.

Installation method: [complete/delete]

Select Direct stick or Loose laid.

Underlay adhesive: [complete/delete]

If the installation method is direct stick, select Acrylic or pressure sensitive adhesive recommended by the manufacturer as suitable for use with DAMTEC acoustic underlay.

If the installation method is loose laid, delete the prompt.

Carpet adhesive: Acrylic adhesive recommended by the manufacturer as suitable for use on top of the DAMTEC acoustic underlay.

#### **DAMTEC Acoustic floor insulation – Engineered panel flooring or solid timber floor - adhered**

Location: [complete/delete]

Describe, or refer to a Finishes Schedule.

Substrate: [complete/delete]

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

Product: [complete/delete]

Select DAMTEC Standard or Color.

Thickness: [complete/delete]

Select 2 mm or 3 mm. Refer to DAMTEC for advice on the most appropriate thickness.

Installation method: Direct stick.

Underlay adhesive: One-part polyurethane adhesive.

Engineered panel flooring or solid timber floor adhesive: one-part polyurethane adhesive recommended by the manufacturer as suitable for use on top of the DAMTEC acoustic underlay.

#### **DAMTEC Acoustic floor insulation – Timber strip flooring (mechanically fixed) over plywood**

Location: [complete/delete]

Describe, or refer to a Finishes Schedule.

Substrate: [complete/delete]

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

Product: [complete/delete]

Select DAMTEC Standard or Color.

Thickness: [complete/delete]

Select 2 mm or 3 mm. Refer to DAMTEC for advice on the most appropriate thickness.

Installation method: Direct stick.

Underlay adhesive: One-part polyurethane adhesive.

Plywood adhesive: One-part polyurethane adhesive on top of the DAMTEC acoustic underlay.

Timber strip flooring fixing: Mechanical fixing and/or one-part polyurethane adhesive recommended by the manufacturer. Mechanical fixings must not pierce the underlay.

Consult with the timber strip flooring manufacturer about their recommended fixing method.

If fixings pierce the underlay, they create a bridge for impact noise between the flooring and the substrate.

#### **DAMTEC 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: [complete/delete]

Select DAMTEC Standard or Color

Thickness: [complete/delete]

Select 2 mm or 3 mm. Refer to DAMTEC for advice on the most appropriate thickness.

Installation method: Direct stick.

Underlay adhesive: One-part polyurethane adhesive recommended by the manufacturer as suitable for adhering the DAMTEC acoustic underlay to the substrate.

Parquet flooring adhesive: One-part polyurethane adhesive recommended by the manufacturer as suitable for use on top of the DAMTEC acoustic underlay.

#### **DAMTEC Acoustic floor insulation – Floating timber flooring**

e.g. clip-lock or tongue and groove loose laid flooring.

Location: [complete/delete]

Describe, or refer to a Finishes Schedule.

Substrate: [complete/delete]

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

Product: [complete/delete]

Select DAMTEC Standard or Color.

Thickness: [complete/delete]

Select 2 mm or 3 mm. Refer to DAMTEC for advice on the most appropriate thickness.

Installation method: Loose lay both DAMTEC acoustic underlay and floating timber flooring.

#### **DAMTEC Acoustic floor insulation – Under screed greater than 35 mm thick at waste**

Location: [complete/delete]

Describe, or refer to a Finishes Schedule.

Substrate: [complete/delete]

e.g. concrete slab, plywood flooring.

Product: DAMTEC Estra.

Thickness: 4 mm

Installation method: Loose laid.

#### **DAMTEC Acoustic floor insulation – Under screed less than 35 mm thick at waste**

Location: [complete/delete]

Describe, or refer to a Finishes Schedule.

Substrate: [complete/delete]

e.g. concrete slab, plywood flooring.

Product: DAMTEC Standard.

Thickness: [complete/delete]

Select 2 mm or 3 mm. Refer to DAMTEC for advice on the most appropriate thickness.

Installation method: Direct stick.

Underlay adhesive: [complete/delete]

Select:

- Acrylic-based adhesive for dry areas.
- One-part polyurethane adhesive for wet areas and external applications. For these applications DAMTEC also recommend the installation of a flexible cementitious waterproofing membrane on top of the DAMTEC acoustic underlay. Confirm the suitability of the adhesive for these applications with the manufacturer before specifying.

Some manufacturers also allow the use of some of their acrylic-based adhesives for fixing DAMTEC acoustic underlays to the substrate for wet area applications but confirm their suitability for these applications with the manufacturer before specifying.

#### **REFERENCED DOCUMENTS**

**The following documents are incorporated into this worksection by reference:**

AS ISO 140		Acoustics - measurement of sound insulation in buildings and of building elements
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 1530		Methods for fire tests on building materials, components and structures
AS/NZS 1530.3	1999	Simultaneous determination of ignitability, flame propagation, heat release and smoke release
AS/NZS 2455		Textile floor coverings - Installation practice
AS/NZS 2455.1	2007	General
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
AS ISO 13007		Ceramic tiles
AS ISO 13007.1	2013	Grouts and adhesives - Terms, definitions and specifications for adhesives
BCA A2.4	2016	General Provisions - Acceptance of design and construction - Fire hazard properties
BCA Spec C1.10	2016	Fire resistance - Fire hazard properties
BCA F5	2016	Health and amenity - Sound transmission and insulation
BCA F5.3	2016	Health and amenity - Sound transmission and insulation - Determination of impact sound insulation ratings
ISO 9001	2000	Quality management systems - Requirements
<b>The following documents are mentioned only in the <i>Guidance</i> text:</b>		
ABCB Sound	2016	Sound insulation handbook
NATSPEC DES 003	2006	Fire hazard properties of insulation and pliable membranes
NATSPEC DES 008	2015	Preparation of concrete substrates
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