

0473P DCTECH ACOUSTIC FLOOR UNDERLAYS

Branded worksection

This branded worksection has been developed by NATSPEC in conjunction with **Dynamic Composite Technologies (DCTech)(the Product Partner)**, and may be used whilst the Product Partner is licensed to distribute it. The copyright remains with NATSPEC. As with all NATSPEC worksections, it is the responsibility of the user to make sure it is completed appropriately for the project. The user should also review its applicability for local conditions and regulations. Check www.natspec.com.au for the latest updated version.

Worksection abstract

This branded worksection *Template* is applicable to reducing impact sound transmission through floors using NCC compliant DCTech underlays for all floor finishes.

Background

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

Refer to NATSPEC TECHnote DES 027 and NATSPEC TECHnote DES 032 for information on impact and airborne sound insulation, including specifying sound insulation properties using appropriate terms, symbols and units.

How to use this worksection

This worksection *Template* must be customised for each project. See A guide to NATSPEC worksections (www.natspec.com.au) for information on *Template* structure, word styles, and completing a worksection.

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 Multilayered board flooring* and *0655 Timber flooring* for overlying finishes.

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.
- Document critical radiant flux in *0651 Resilient finishes*, *0652 Carpets*, *0654 Multilayered board flooring*, *0655 Timber flooring*, *0657 Resin based seamless flooring*.

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, the Australian Institute of Architects' practice advisory subscription service, for notes on the following:

- Guarantees and warranties.

Specifying ESD

DCTech acoustic floor underlay has the following sustainable product attributes:

- Manufactured from recycled rubber granules.
- Recyclable.
- Low VOC emission content.

Refer to NATSPEC TECHreport TR 01 on specifying ESD.

1 GENERAL

DCTech is 100% Australian owned and operated with over 20 years of experience supplying a range of technically advanced insulation materials and related products to the Australian construction industry. DCTech offers a clear focus on customer service through national product availability, installation and maintenance advice, a comprehensive Technical Library, and competitive pricing.

DCTech is large enough to ensure quantity, yet small enough to ensure quality, and is able to offer a total system solution from foundation to roof.

1.1 RESPONSIBILITIES

General

Requirement: Provide DCTech acoustic floor underlay systems, as documented.

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

0171 General requirements calls for sealing of penetrations around conduits and sleeves to maintain acoustic rating, if required.

It is the responsibility of the designer to design and document floor, wall and ceiling systems to the requirements of the NCC for sound insulation. If the design brief exceeds the performance requirements of the NCC, document in the relevant worksection or on the drawings.

1.2 COMPANY CONTACTS

DCTech technical contacts

Website: www.dctech.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

Website: www.dctech.com.au/technical-library/

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 subfloor 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 NCC Schedule 3.

- This includes the Flammability Index, Smoke-Developed Index and 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 and NATSPEC TECHnote DES 020 on NCC classification of fire behaviour in building materials and assemblies.

- 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.
- Substrate: The surface to which a material or product is applied.
- Underlay: A non-structural layer of rubber, cork, plywood or in situ levelling compound to provide a smooth and flat surface for flooring installation. Rubber and cork underlays have acoustic sound absorbing properties.

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

1.6 SUBMISSIONS

Fire performance

Fire hazard properties: Submit evidence of conformity to PRODUCTS, **FIRE PERFORMANCE, Fire hazard properties.**

Products and materials

Manufacturer's 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.

Type tests: Submit results, as follows:

- Weighted normalised impact sound pressure level $L_{n,w}$: To AS ISO 717.2.

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, when there are no SELECTIONS.

Samples

General: Submit one sample of each underlay.

Minimum size per sample:

- Sheet: 450 x 450 mm.
- Tiles: A whole tile or 0.09 m², 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

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

Site tests: Submit results, as follows:

- Surface pH test.
- Moisture content test.
- Weighted standardised impact sound pressure level $L'_{nT,w}$.

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 **SUBSTITUTIONS** in 0171 *General requirements*.

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

Product identification

General: 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.

Storage and handling

General: Store horizontally and keep dry.

2.2 FIRE PERFORMANCE

Fire hazard properties

See NATSPEC TECHnote DES 003 for more information on fire hazard properties of insulation materials and NATSPEC TECHnote DES 020 on fire behaviour of building materials and assemblies. See also BCA Spec C1.10 Table 4.

Underlay materials: Tested to AS/NZS 1530.3. Fire hazard indices as follows:

- Spread-of-Flame Index: ≤ 9 .
- Smoke-Developed Index: ≤ 8 if Spread-of-Flame Index > 5 .

2.3 INSULATION MATERIALS

VOC limits

Total VOC limit: 0.5 mg/m² generally.

Adhesives

General: To DCTech 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.

2.4 DCTECH ACOUSTIC FLOOR UNDERLAYS

General

Compliance: DCTech products have been tested to the EN ISO 10140 series, with results calculated to AS ISO 717.2, as required by BCA F5.3.

Products have been tested to EN ISO 10140-2:2010, now superseded by EN ISO 10140-2: 2021. Reports issued for tests carried out before the latest published versions can still be used.

Products described as impact acoustic and anti-vibration are very similar because both are designed to reduce the propagation of vibration causing acoustic problems. In broad terms, impact acoustic products are generally those used for multi-unit residences, shopping centres and hotels, while anti-vibration products are used for industrial and plant room applications.

Products described as being for mechanical protection are those used for protecting items such as waterproofing membranes.

Isolgomma® Basewood

Description: Styrene Butadiene Rubber (SBR) fibres and granules, compacted using a latex binder in a hot process. A black synthetic, 90 g/m² non-woven anti-stretch backing is applied on one side.

Application: Impact acoustic floor underlay for loose laid floating timber floors.

Features: High acoustic performance in reduced thickness, resistant to humidity, easy to lay.

Thickness: 4.5 mm.

Roll length: 10 metres.

Roll width: 1040 mm including 40 mm border for overlapping rolls.

Isolgomma® Basewood AS

Description: Styrene Butadiene Rubber (SBR) fibres and granules, compacted using a latex binder in a hot process. A black synthetic, 90 g/m² non-woven anti-stretch backing is applied on one side. The underlay is perforated with regularly spaced slotted cut-outs to allow adhesive for fixing the timber flooring to make contact with the substrate.

Application: Impact acoustic floor underlay for adhesive fixed floating timber floors.

Features: High acoustic performance in reduced thickness, resistant to humidity, easy to lay.

Thickness: 4.5 mm.

Roll length: 5 metres.

Roll width: 1040 mm including 40 mm side border for overlapping rolls.

Isolgomma® Grei

Description: Ethylene Propylene Diene Monomer (EPDM) rubber granules compacted using a latex binder in a hot process. A grey synthetic, 90 g/m² non-woven anti-stretch backing is applied on one side.

Application: Impact acoustic floor underlay for under-screed applications. Select Isolgomma® Grei PTB Version with waterproof non-woven anti-stretch backing for liquid screeds.

Features: High acoustic performance, resistant to humidity, easy to lay.

Thicknesses: 5 mm, 8 mm.

Roll length: 5 metres.

Roll width: 1040 mm including 40 mm adhesive side border for overlapping rolls.

Isolgomma® Upgrei

Description: Ethylene Propylene Diene Monomer (EPDM) rubber granules that are anchored with carboxylate latex binder to a backing, made with 80 g/m² non-woven, green-coloured, anti-stretch film and 200 g/m² polyester fibre.

Application: Impact acoustic floor underlay for under-screed applications. Select Isolgomma® Upgrei PTB Version with waterproof non-woven anti-stretch backing for liquid screeds.

Features: High acoustic and thermal performance, resistant to humidity, easy to lay.

Roll length: 5 metres.

Roll width: 1040 mm including 40 mm adhesive side border for overlapping rolls.

Thickness: 10 mm.

Isolgomma® Roll

Description: Styrene Butadiene Rubber (SBR) fibres and granules, compacted using a latex binder in a hot process. A blue synthetic, 90 g/m² non-woven anti-stretch backing is applied on one side.

Application: Impact acoustic floor underlay for under-screed applications. Select Isolgomma® Roll PTB Version with waterproof non-woven anti-stretch backing for liquid screeds.

Features: High acoustic performance, resistant to humidity, easy to lay.

Thicknesses: 5 mm, 7 mm, 10 mm.

Roll length: 5 metres.

Roll width: 1040 mm including 40 mm adhesive side border for overlapping rolls.

Isolgomma® Point 17

Description: Styrene Butadiene Rubber (SBR) fibres and granules, compacted using a latex binder in a hot process. A blue synthetic, 130 g/m² non-woven anti-stretch backing is applied on one side. Point 17 is a shaped product designed for high load applications. Panels are dimpled on one side.

Application: Impact acoustic floor underlay panels for under-screed applications.

Features: High acoustic and vibration performance, suitable for high loads up to 5000 kg/m², and stable. It is ideal for thick screeds in warehouses, malls and industrial buildings.

Thickness: 17 mm.

Panel size: 1000 mm W x 1000 mm L.

Isolgomma® Sylpro

Description: Styrene Butadiene Rubber (SBR) fibres and granules, compacted using a polyurethane glue in a hot-press process.

Application: Anti-vibration underlay for floating floors, mechanical protection and under-screed applications.

Features: High acoustic performance in a reduced thickness, durable, easy to lay.

Density 730 kg/m³. Thicknesses: 3 mm, 5 mm, 6 mm, 8 mm, 10 mm.

Roll length: 20 metres (3 mm), 10 metres (5 mm, 6 mm), 8 metres (8 mm), 6 metres (10 mm).

Roll width: 1250 mm.

Modular tiles: 1250 mm x 1000 mm.

Isolgomma® Sylpro AD

Description: Styrene Butadiene Rubber (SBR) fibres and granules, compacted using a polyurethane glue in a hot-press process. A non-woven, non-stretch synthetic membrane is applied on one side for added protection.

Application: Anti-vibration underlay for floating floors and mechanical protection.

Features: High acoustic performance in a reduced thickness, durable, easy to lay.

Density 800 kg/m³.

Thicknesses: 6 mm, 8 mm, 10 mm.

Roll length: 8 metres.

Roll width: 1200 mm.

2.5 DCTECH ACOUSTIC ACCESSORIES

Isolgomma® Profyle

Description: Perimeter edging strip for isolating floor screeds and finishes from surrounding walls to prevent acoustic bridging. 6 mm thick grey polythene strip with adhesive backing. Pre-formed to facilitate folding into a right-angle profile prior to fixing.

Density 31.5 kg/m³.

Roll length: 1.5 metres.

Roll widths:

- 200 mm overall for folding to a 150 mm vertical leg and 50 mm horizontal leg.
- 300 mm overall for folding to a 200 mm vertical leg and 100 mm horizontal leg.

2.6 ADHESIVES

Standards

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

Carpet: To AS 2455.1.

Type

Requirement: Provide adhesives, compatible with the adhering surface materials, to SELECTIONS.

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 DCTech 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.

Specify the adhesive type for each application under SELECTIONS 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 DCTech products to DCTech's recommendations.

3.2 PREPARATION

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	2000 mm	4 mm
Abrupt deviation tolerance	150 mm	0.5 mm

Planeness tolerance class: For locations to receive resilient finishes nominate Class A in the **Flatness tolerance class table** in 0315 *Concrete finishes* and **TOLERANCES** in 0612 *Cementitious toppings*. 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.

Requirement: Do not start installation until the concrete substrate conforms to AS 1884 clause 3.1.

Concrete substrate rectification: Conform to the following:

- Surface treatments: Mechanically remove any incompatible surface treatments, including the following:
 - Sealers and hardeners.
 - Curing compounds.
 - Waterproofing additives.
 - Surface coatings and contamination.
- Planeness, smoothness, projections: Remove projections and fill voids and hollows with a smoothing and self-levelling compound compatible with the adhesive. Allow filling or levelling compound to dry to manufacturer's recommendations.

Cleaning: Remove loose materials or dust.

Timber, plywood and particleboard substrates

Requirement: Do not start installation until the timber, plywood and particleboard substrate conforms to AS 1884 clause 3.6.

Timber, plywood and particleboard substrate rectification: 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.

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

Conditioning of floor covering and subfloor: To AS 1884 clause 4.1 and manufacturer's recommendation.

DCTech 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 at least 24 hours.

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

3.3 INSTALLATION**DCTech acoustic underlay – adhesive fixed systems**

Perimeter edge strips: Fix Isolgomma® Profyle to walls around the perimeter of the room before installing the underlay or at the end of the material relaxation period, run the underlay 50 mm up the wall. Cut the upstand at the floor/wall junction with a straightedge and sharp knife and leave a strip of underlay against the wall. Butt underlay on wall and floor together to form a square junction.

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.

DCTech acoustic underlay – loose laid systems

Perimeter edge strips: Fix Isolgomma® Profyle to walls around the perimeter of the room before installing the underlay or at the end of the material relaxation period, run the underlay 50 mm up the wall. Cut the upstand at the floor/wall junction with a straightedge and sharp knife and leave a strip of underlay against the wall. Butt underlay on wall and floor together to form a square junction.

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.

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]

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

Abutments

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: [complete/delete]

Strip: [complete/delete]

Select Isolgomma® Profyle perimeter edging strip or turning the underlay up the wall 50 mm.

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.

3.5 TESTING

0171 General requirements defines different tests in **INTERPRETATION**, **Definitions** and calls for an inspection and testing plan in **TESTING - GENERALLY, Inspection and testing plan**.

Substrate tests

Moisture content: Test substrate for suitability for the installation of resilient floor coverings to AS 1884 Appendix A.

- Maximum relative humidity of concrete: To AS 1884 Appendix A3.2.
- Moisture content of timber, plywood and particleboard subfloors: To AS 1884 Appendix A3.3.

Some manufacturers may provide products which can be used on concrete slabs with a moisture content greater than the maximum allowed by AS 1884, or that require a moisture content less than the maximum allowed by AS 1884.

Surface pH: Test concrete subfloor for suitability for the installation of resilient floor coverings to AS 1884 Appendix C.

- Maximum pH: 10.

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

Completion tests

Weighted standardized impact sound pressure level $L'_{nT,w}$ of completed installation: To AS ISO 717.2.

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 100-3150 Hz.

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

4 SELECTIONS

Schedules are a tool to specify properties required for products or systems. If the principal permits documentation of the product or system by proprietary name, some of the properties may be unnecessary and can be deleted. Document the product or system's location or application here and/or on the drawings with a matching project code. Refer to NATSPEC TECHnote GEN 024 for guidance on using and editing schedules.

4.1 PERFORMANCE

Acoustic floor underlays performance schedule

The performance values apply to the complete flooring assembly. Document sound insulation properties by the appropriate quantities and using the correct terms, symbols and units.

	A	B	C
Fire hazard property: Spread-of-Flame Index			
Fire hazard property: Smoke-Developed Index			
Weighted normalised impact sound pressure level $L_{n,w}$			

The codes in the header row of the schedule designate each application or location of the item scheduled. Edit the codes to match those in other contract documents.

Acoustic performance: Refer to NATSPEC TECHnote DES 027 for information on impact sound insulation and NATSPEC TECHnote DES 032 for information on airborne sound insulation.

Fire hazard properties: Refer to BCA Spec C1.10.

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

4.2 DCTECH SELECTIONS

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

As a general guide:

- For floating floors, underlays are loose laid and joints taped.
- Under screeds, underlays are loose laid.
- For finishes directly adhered to the underlay, the underlay should also be adhered to the substrate.

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

DCTech 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: Isolgamma® Sylpro.

Thickness: 3 mm.

A thickness of no greater than 3 mm is suitable for use with ceramic tiles provided they are no larger than 400 mm x 400 mm and joints between them are no less than 3 mm. Refer to DCTech for advice where this is not the case.

Installation method: Direct-stick using manufacturer's specified systems and warranted adhesives, screed additives and flexible grouting systems.

Primer: [complete/delete]

e.g. Two-part water-based epoxy for wet areas or Solvent-free water-based for porous surfaces in dry areas. Refer to manufacturers for guidance.

Underlay adhesive: To manufacturer's recommendations.

Ceramic tile adhesive – dry areas: As recommended by the manufacturer as suitable for use directly on top of the DCTech acoustic underlay for dry areas.

Ceramic tile adhesive – wet areas: As recommended by the manufacturer as suitable for use directly on top of the DCTech acoustic underlay on top of cured waterproofing membrane for wet areas.

Refer to the manufacturer for guidance.

DCTech acoustic floor insulation – Stone and terrazzo tiling

Substrate: [complete/delete]

e.g. Concrete slab, Plywood flooring, Floorboards with fibre cement underlay.

Product: Isolgamma® Sylpro.

Thickness: 3 mm.

A thickness of no greater than 3 mm is suitable for use with stone and terrazzo tiles provided they are no larger than 400 mm x 400 mm and joints between them are no less than 3 mm. Refer to DCTech for advice where this is not the case.

Installation method: Direct-stick using manufacturer's specified systems and warranted adhesives, screed additives and flexible grouting systems.

Primer: [complete/delete]

E.g. two-part water-based epoxy for wet areas or solvent-free water-based for porous surfaces in dry areas. Refer to manufacturers for guidance.

Underlay adhesive: To manufacturer's recommendations.

Stone and terrazzo tile adhesive – dry areas: As recommended by the manufacturer as suitable for use directly on top of the DCTech acoustic underlay for dry areas.

Stone and terrazzo tile adhesive – wet areas: As recommended by the manufacturer as suitable for use directly on top of the DCTech acoustic underlay on top of cured waterproofing membrane for wet areas.

DCTech acoustic floor insulation – Resilient finishes

Location: [complete/delete]

Describe, or refer to a Finishes Schedule.

Substrate: [complete/delete]

e.g. Concrete slab, Plywood flooring, Floorboards with fibre cement or hardboard underlay.

Product: Isolgamma® Sylpro AD.

Thickness: 6 mm.

Installation method: Direct stick using manufacturers specified systems and adhesives.

Primer: [complete/delete]

E.g. Two-part water-based epoxy for wet areas or Solvent-free water-based for porous surfaces in dry areas. Refer to manufacturers for guidance.

Underlay adhesive: To manufacturer's recommendations.

Resilient finishes adhesive – dry areas: As recommended by the manufacturer as suitable for use directly on top of the DCTech acoustic underlay for dry areas.

Resilient finishes adhesive – wet areas: As recommended by the manufacturer as suitable for use directly on top of the DCTech acoustic underlay on top of cured waterproofing membrane for wet areas.

DCTech acoustic floor insulation – Carpets

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: Isolgamma® Sylpro.

Thickness: [complete/delete]

Select 3, 5 or 10 mm. Refer to DCTech for advice on the most appropriate thickness.

Installation method: Direct stick or Loose laid.

Primer: [complete/delete]

E.g. Two-part water-based epoxy for wet areas or Solvent-free water-based for porous surfaces in dry areas. Refer to manufacturers for guidance.

Underlay adhesive: To manufacturer's recommendations.

Carpet adhesive: To manufacturer's recommendations.

If the installation method is loose laid, delete this reference to carpet adhesive.

DCTech 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 Isolgamma Basewood AS for flooring of 11 mm thickness or greater, or Sylpro for flooring of any thickness.

Thickness: [complete/delete]

Select 3, 5 or 10 mm for Sylpro or 4.5 mm for Basewood. Refer to DCTech for advice on the most appropriate thickness.

Installation method: [complete/delete]

Select direct stick for Sylpro or loose laid for Basewood.

Primer: [complete/delete]

Refer to the manufacturer for guidance.

Underlay adhesive: To manufacturer's recommendations.

Engineered panel flooring or solid timber floor adhesive: To manufacturer's recommendations.

DCTech 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 Isologmma Basewood for flooring of 11 mm thickness or greater, or Sylpro for flooring of any thickness.

Thickness: [complete/delete]

Select 3, 5 or 10 mm for Sylpro or 4.5 mm for Basewood. Refer to DCTech for advice on the most appropriate thickness.

Installation method: [complete/delete]

Select direct stick for Sylpro or loose laid for Basewood.

Primer: [complete/delete]

Refer to the manufacturer for guidance.

Underlay adhesive: To manufacturer's recommendations.

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 the installation method is adhesive fixed only, delete references to mechanical fixings.

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

DCTech 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 Isologmma Basewood or Basewood AS for flooring of 11 mm thickness or greater, or Sylpro for flooring of any thickness.

Thickness: [complete/delete]

Select 3, 5 or 10 mm for Sylpro or 4.5 mm for Basewood AS. Refer to DCTech for advice on the most appropriate thickness.

Installation method: Direct stick.

Primer: [complete/delete]

Refer to the manufacturer for guidance.

Underlay adhesive: To manufacturer's recommendations.

Parquet flooring adhesive: To manufacturer's recommendations.

DCTech 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, Plywood flooring, Floorboards with fibre cement underlay.

Product: [complete/delete]

Select Isologmma Basewood for flooring of 11 mm thickness or greater, or Sylpro for flooring of any thickness.

Thickness: [complete/delete]

Select 3, 5 or 10 mm for Sylpro or 4.5 mm for Basewood. Refer to DCTech for advice on the most appropriate thickness.

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

DCTech acoustic floor insulation – Under screeds

Location: [complete/delete]

Describe, or refer to a Finishes Schedule.

Substrate: [complete/delete]

e.g. Concrete slab, Plywood flooring.

Product: [complete/delete]

Select from Isologamma Sylpro, Upgrei, Grei, Roll or Point 17. Seek DCTech's recommendations to suit the project's specific requirements.

Thickness: [complete/delete]

Select:

- 3 mm, 5 mm or 10 mm for Sylpro.
- 5 mm or 8 mm for Grei.
- 8 mm for Upgrei.
- 5 mm, 7 mm or 10 mm for Roll.
- 17 mm for Point 17.

Refer to DCTech for advice on the most appropriate thickness.

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

Primer: [complete/delete]

Refer to the manufacturer for guidance.

Underlay adhesive: To manufacturer's recommendations.

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 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 1884	2021	Floor coverings - Resilient sheet and tiles - Installation practices
AS 2455		Textile floor coverings - Installation practice
AS 2455.1	2019	General
AS ISO 13007		Ceramic tiles
AS ISO 13007.1	2020	Grouts and adhesives - Terms, definitions and specifications for adhesives
NCC Schedule 3	2019	Schedule 3 Definitions
BCA F5.3	2019	Health and amenity - Sound transmission and insulation - Determination of impact sound insulation ratings
EN ISO 10140		Acoustics - Laboratory Measurement of Sound Insulation of Building Elements

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/NZS ISO 140.7	2006	Field measurements of impact sound insulation of floors (ISO 140-7:1998, MOD)
ABCB Sound	2021	Sound transmission and insulation in buildings handbook
BCA Spec C1.10	2019	Fire resistance - Fire hazard properties
NATSPEC DES 003	2018	Fire hazard properties of insulation and pliable membranes
NATSPEC DES 008	2015	Preparation of concrete substrates
NATSPEC DES 020	2018	Fire behaviour of building materials and assemblies
NATSPEC DES 027	2016	Impact sound insulation
NATSPEC DES 032	2018	Airborne sound insulation
NATSPEC GEN 006	2015	Product specifying and substitution
NATSPEC GEN 024	2021	Using NATSPEC selections schedules
NATSPEC TR 01	2021	Specifying ESD
EN ISO 10140		Acoustics - Laboratory Measurement of Sound Insulation of Building Elements
EN ISO 10140-2	2010	Measurement of Airborne Sound Insulation