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# ARDEX DS 40

## Impact Sound Reduction and Decoupling System

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Provides crack bridging function - allowing safe installation onto critical substrates

Pre-cut mats, simplify handling and installation

Mat thickness of 4.5mm to minimise build height

Tile over directly with ARDEX tile adhesives

Reduces the transmission of impact and air-borne sound - impact sound reduction 14 dB (field result 18 dB when using ARDEX X56 adhesive)

For renovation and new construction, domestic and commercial areas with loads up to 2 kN/m<sup>2</sup>

Suitable for heated screeds

Low VOC content - meets Green Building Council of Australia Green Star IEQ-13 requirements

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# ARDEX DS 40

## Impact Sound Reduction and Decoupling System

### DESCRIPTION

ARDEX DS 40 is an acoustic mat designed to effectively reduce impact sound. Permanently elastic material with mineral fillers and PU binders. Sanded surface and fleece backed.

### AREAS OF APPLICATION

Internal floor (for external applications contact ARDEX Australia).  
For renovation and new construction, domestic and commercial areas with loads up to 2 kN/m<sup>2</sup>.  
Decoupling and sound reduction system for the installation of tiles, slabs, natural stone and concrete pavers.  
Suitable for use in domestic bathrooms/ wet areas with ARDEX Waterproofing Systems.

### TO (SUBSTRATES)

Concrete, sand:cement screeds  
Heated screeds  
Dry screed systems  
Wooden floors and wooden particle board  
Old tiles and slabs

### SUBSTRATE PREPARATION

All substrates must be dry, firm, load bearing and free from dust and release agents.  
Uneven concrete surfaces have to be primed with ARDEX Multiprime and levelled with ARDEX LQ92.  
Commercial grade vinyl (without foam backing) must be sanded and cleaned.  
Porous substrates should be primed with ARDEX Multiprime.  
Dense, smooth, impervious or wood surfaces should be primed with ARDEX P 82 or ARDEX P 9.  
The DS 40 is crack-bridging up to 1mm.

### Concrete

This includes precast, in-situ and wood floated concrete. As concrete exhibits drying shrinkage, allow to cure for at least 4 weeks prior to tiling. Any surface laitance, concrete sealers, curing compounds, and other materials should be removed from the surface prior to tiling. Steel trowel finished concrete should be roughened mechanically to remove laitance and provide a good key for tiling. The surface shall be true and level and pitched to drains where required. The concrete should have adequate surface profile (e.g. broom finish) to provide a mechanical key. Smooth surfaces and/or dense concrete greater than 35MPa must be mechanically prepared prior to tiling.

### Cement Render/Screeds

New renders and screeds should be finished with a wood float to the required surface regularity. Screeds shall be pitched to drains where required. Allow at least 7 days to cure prior to tiling.

### Compressed Fibre-Cement Sheet Internal Applications

These sheets must be fixed strictly in accordance with manufacturer's instructions and be deemed suitable for the application by the manufacturer.  
Tiling over compressed fibre-cement sheet for external flooring applications should be carried out as per sheet manufacturer's recommendations and Australian Standard AS 3958.

### ARDEX Liquid Applied Undertile Waterproofing Membranes.

ARDEX undertile waterproofing must be applied according to instructions and thoroughly dry prior to tiling.

### Existing Ceramic Tiles (Internal Only)

These include sound, clean, glazed and unglazed tiles. Existing tiles must be firm and stable. Roughen the surface by mechanical means, clean off contamination and dust before tiling. Ensure that at least 80% of the glaze is removed.

### FIXING TECHNIQUE

Refer to Technical Bulletin TB147 for detailed systems.  
To avoid transmission of sound to adjoining walls/columns, install sound strips along the perimeters.

Lay the ARDEX DS 40 mats and cut where necessary. The ARDEX DS 40 can be easily cut with a carpet knife from the reverse side.  
Apply ARDEX X 56 adhesive with a 3mm notch trowel (if the surface is rough use a 4mm notch trowel). Lay the ARDEX DS 40 within the open time of the adhesive with fleece side into the fresh mortar bed. Press the mat in with a trowel or float or metal roller. Make sure the mats are fixed without any gaps. Should adhesive come through the joints please take up the mat and clean it and repeat installation. Fix the mats in a brick pattern (or broken bond pattern) to avoid cross joints.

Installation of tiles can be done 2 - 4 hours after installation of the ARDEX DS 40 mat (allow the ARDEX X 56 to set). Prior to the installation of tiles/slabs please check the joints in the ARDEX DS 40 mat and fill any gaps with a neutral cure silicone.

For fixing tiles the following adhesives can be used. Acoustic performance may vary marginally depending on adhesive used:-

- ARDEX X 56 (fast setting and flexible) can be used where movement is anticipated (e.g. post tension concrete), or
- ARDEX STS 8 (for stable concrete, and mixed with Ardion 90 where movement is anticipated), or
- For the installation of moisture sensitive natural stones, ARDEX S 28 Neu (mixed with Ardion 90) is recommended.

Ensure solid bedding of tiles by occasionally removing tiles and checking that there are no voids in the adhesive layer. Apply more adhesive by buttering the back of the tile and/or using a larger size notched trowel to spread the adhesive on the substrate.

The coverings to be installed should have a minimum size of 15x15 cm and a minimum breaking strength of 1500 N. Stoneware tiles should be at least 8mm thick and natural stone should be at least 15mm thick.

### Wet areas

Suitable for domestic (not public) wet areas/bathrooms.  
Once the DS 40 has been installed, ensure that mats are butt joined, filling any gaps with a neutral cure silicone/or polyurethane sealant. Allow the sealant to cure. Next install a screed with falls to waste. Once the screed is dry (seven days), the area should be waterproofed with ARDEX WPM 002 (Superflex two part) as per instructions on same. Allow the membrane to dry before tiling.  
Alternatively the screed can be installed first, followed by the mat, then membrane (minimum 2mm dry film thickness) and lastly tiled. For detailed wet area specification contact ARDEX.

For grouting use ARDEX grout mixed with flexible additive.

### COVERAGE

ARDEX DS 40 mats are 750 x 500 x 4.5mm. Each mat will cover 0.375m<sup>2</sup> with a pack of 10 covering 3.75m<sup>2</sup>. A pallet of 300 mats will cover 112.50m<sup>2</sup>.

### PACKAGING

Cartons of 10 mats, 300 mats to a pallet.

### SHELF LIFE

ARDEX DS 40 has a shelf life of 36 months when stored in the original unopened packaging, in a dry place at 23°C and 50% relative humidity.

### Pay attention to the following:

Apply ARDEX DS 40 at temperatures above + 5°C.  
• Acoustic ratings are based on specific floor/ceiling configuration and may therefore vary on site. Site evaluation is needed to determine the most suitable system for the project.  
• Construction and movement joints in the substrates have to be brought up to the tile surface.  
• Do not use ARDEX DS 40 in permanently wet areas (e.g. public showers).

### SAFETY DATA

Avoid contact with skin and eyes; in case of contact with the eyes, wash out immediately with fresh running water. If irritation continues, seek medical attention. Wear protective gloves, clothing and eye protection. Avoid inhaling dust/fumes/gas/mist/vapours/spray. If fumes or combustion products are inhaled remove from contaminated area. Ensure adequate ventilation during application. Check with your local Council regarding the disposal of contents. Call the Poisons Information Centre on 131 126 (AUS) and 0800 764 766 (NZ) or call a doctor if you feel unwell. Additional information is in the Safety Data Sheet (SDS) at [www.ardexaustralia.com](http://www.ardexaustralia.com)

### TECHNICAL DATA

**Colour:** Green  
**Weight:** 5.1kg/m<sup>2</sup>

**Impact Sound Reduction acc. DIN EN ISO 140-8:** 14 dB  
**Fire Rating:** B2 mat only  
B1 with tile

**Thermal Transfer Resistance:** 0.036 m<sup>2</sup> K/W  
**Thermal Conductivity:** 0.11 W/mK  
**Vapour Transmission rate μ:** 450  
**Resistant To Chair Castors:** Yes  
**Suitable for Underfloor Heating:** Yes

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### GUARANTEE

ARDEX Australia Pty Ltd ("we" or "us") guarantees this product ("our goods") is free from manufacturing defects and will perform to any applicable specification published by us for 10 years from the date of purchase. Our liability under this guarantee is limited at our option to replacement of the product, repair of any damage to the immediate surface or area of application of the product, or compensation, in each case if we are satisfied loss or damage was due to a breach of this guarantee. This guarantee does not apply if damage or loss is due to failure to follow published instructions or any act or circumstance beyond our control, including shade variations and efflorescence. If you wish to make a claim under this guarantee you must notify us (ARDEX Australia Pty Ltd, 20 Powers Road Seven Hills NSW 2147; Toll Free: 1800 224 070; Email: [technicalservices@ardexaustralia.com](mailto:technicalservices@ardexaustralia.com)) and provide evidence of your purchase of the product within 30 days of any alleged loss or damage occurring. We reserve the right to ask you for satisfactory evidence of any alleged loss or damage. Any claim under this guarantee is at your cost. This guarantee is in addition to any rights or remedies you may have as a "consumer" under the Australian Consumer Law and to that extent you need to be aware that: "Our goods come with guarantees that cannot be excluded under the Australian Consumer Law. You are entitled to a replacement or refund for a major failure and for compensation for any other reasonably foreseeable loss or damage. You are also entitled to have the goods repaired or replaced if the goods fail to be of acceptable quality and the failure does not amount to a major failure".

### DISCLAIMER

The technical details, recommendations and other information contained in this data sheet are given in good faith and represent the best of our knowledge and experience at the time of printing. It is your responsibility to ensure that our products are used and handled correctly and in accordance with any applicable Australian Standards. Our instructions and recommendations are only for the uses they are intended. Users are advised to confirm that this product is suitable for their application and conforms with the specifications of the system. We also reserve the right to update information without prior notice to you to reflect our ongoing research and development program. Country specific recommendations, depending on local standards, codes of practice, building regulations or industry guidelines, may affect specific installation recommendations. The supply of our products and services is also subject to certain terms, warranties and exclusions, which may have already been disclosed to you in prior dealings or are otherwise available to you on request. You should make yourself familiar with them.

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