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# ARDEX WA 100

## Two Part Epoxy Adhesive for Natural Stone

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Easy to use with 1:1 mixing ratio by volume

Smooth, easy to blend consistency

Non slump capability

Ideal for natural stones – will not stain or bleed through

Strong permanent bond that will not deteriorate over time

Excellent adjustability to easily compensate substrate and tile variations

Capable of withstanding shock and vibration movements

Good chemical resistance

Suitable for fixing white and translucent marble, creamy white colour

Can be used in immersed conditions such as swimming pools

For internal and external applications

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

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# ARDEX WA 100

## Two Part Epoxy Adhesive for Natural Stone

### DESCRIPTION

ARDEX WA 100 is a high strength, creamy white, two part epoxy stone adhesive that exhibits superior bond strength. It is specially designed for the fixing of natural stone such as marble and granite, including those sensitive to moisture, on vertical surfaces such as walls and overheads in interior and exterior applications. It is also ideal for large format ceramic and porcelain tiles.

ARDEX WA 100 can also be used for the fixing and bedding of natural stone such as marble and granite slabs on walls and floors, bench tops and stair risers.

### FOR FIXING (TILE TYPES)

All types of natural stone, plus fully vitrified, ceramic and porcelain tiles.

### TO (SUBSTRATES)

Concrete, renders, screeds  
Medium density fibre-cement sheet, plasterboard  
Existing ceramic and stone tiles  
Autoclaved aerated concrete (AAC)  
Brick and blockwork  
Internal sheet timber

### SUBSTRATE PREPARATION

The surface being adhered to must be clean, firm and free of dust, dirt, oil, grease, curing compounds, release agents and other barrier materials, as well as being sound, stable and strong enough to support the weight of the tiles or stone being fixed. Ensure surfaces are dry before tiling, with no residue or permanent damp.

Ensure that the substrate's required drying time, as given in the relevant part of AS 3958, is allowed to elapse prior to fixing the tiles.

### 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 application. Steel trowel finished concrete should be roughened mechanically to remove laitance and provide a good key. The surface should be true and level with adequate surface profile to provide a mechanical key. Smooth surfaces and/or dense concrete greater than 35MPa must be mechanically prepared.

### Cement Render/Screeds

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

### Plasterboard/Medium Density Fibre-Cement Sheet

Provided that these boards are firmly and rigidly fixed to adequately support the weight of the tile or stone, they can be fixed directly. Please ensure the surface is completely clean and free of loose materials. These sheets must be fixed

strictly in accordance with manufacturers instructions and be deemed suitable for the application by the manufacturer.

### Existing Ceramic Tiles

These include sound, clean, glazed and unglazed tiles. If the area to be tiled is internal, tiles can be directly fixed using ARDEX WA 100 without mechanically grinding the glaze, following cleaning with sugar soap using an industrial grade scourer. Rinse and allow to dry. In permanently wet areas and externally, ensure a minimum of 90% coverage of the tile or stone is achieved.

### Autoclaved Aerated Concrete (AAC)

Remove loose particles from the surface.

### Blockwork and Brickwork

Brickwork and blockwork must be sound, flush and level. Brickwork must be rendered, where other surfaces are not smooth and level the wall must be rendered. Ensure all voids and raked out mortar joints are filled and excess mortar pared back.

### Internal Sheet Timber

Particleboard, plywood, MDF and cork, with the exception of unbonded timber such as laminated flooring or strip timber floors (e.g. cypress pine). Timber floors must be structurally sound and the maximum load deflection must not exceed 1/360 of the span. Timber floors must have good underfloor ventilation and underfloor moisture levels must be stable during the life of the flooring system. Free water sources must not be allowed under timber floors as dimensional stability will be compromised. All timber boards (new and old), must be sanded with 40 grit sand paper (or 24 grit if timber is coated/stained) to the original timber so as to achieve a suitable surface profile and to remove surface contaminants. For sheeted material e.g. particleboard flooring, tape joints with PVC ducting tape. Virgin strip timber floors must be fibre-cement sheeted prior to tiling.

### Painted Surfaces

Thoroughly remove painted surfaces mechanically, do not use paint stripper or solvents. Allow surface to dry after cleaning.

### MIXING

It is essential to use the correct mixing ratio of 1:1 Part A : Part B by volume. Transfer the measured amount of Part A to a suitable sized mixing container and add the equal amount of hardener Part B. Mix the two components thoroughly until a uniform mixture is obtained and the adhesive is ready for use. Smaller quantities can be mixed by hand with a trowel, larger quantities can be mixed with an electric drill.

Do not apply at surface temperatures below 10°C or above 35°C. The pot life of the mixed adhesive is approximately 45 minutes at 23°C and 50% relative humidity.

### FIXING TECHNIQUE

Before fixing ensure the substrate has been prepared and the tile or stone is free from dust. Tile or stone should be fixed in accordance with Australian Standard AS 3958.

For wall applications it is possible to use the spot bonding method, however ARDEX always recommends compliance with the Australian Standard. If following this method, mechanically roughen areas that are to receive ARDEX WA100 adhesive spots, remove dust with a stiff brush and remove any loose particles or dust from the back of the stone, tile or substrate by wiping with a damp sponge to ensure a good, clean direct bond. Wipe dry both surfaces with a clean cloth.

Apply spots of ARDEX WA100 on the back of the stone or tile using a minimum of 5 spots applied evenly across the back, one in each corner and one in the centre. Ensure that at least 10% coverage is achieved with the 5 spots. The final spot thickness should be a minimum of 3mm and a maximum of 25mm.

To achieve the required 10% coverage the following spot diameters are required;

Tile Size (mm)	Spot Diameter (mm)
300 x 300	50mm
600 x 600	100mm
900 x 900	150mm

For floor applications and external use, we recommend a minimum of 90% coverage on the back of the tile or stone. Spot fixing on floors is not recommended.

ARDEX WA100 has an adjustment time of 45 minutes. Please be aware of site conditions when considering these times. All tools should be cleaned with water immediately after use.

### **MOVEMENT JOINTS**

Movement joints must be in accordance with Australian Standard AS 3958.

### **GROUTING/DRYING TIME**

Grouting can proceed once ARDEX WA100 has hardened sufficiently so that tiles will not be dislodged, usually after approximately 8 hours at 23°C and 50% relative humidity. Allow longer for low temperatures.

The tile joints should be grouted with the appropriate ARDEX grout. For moisture sensitive stone in internal, dry locations ARDEX MG is recommended.

### **COVERAGE**

A 20L unit of ARDEX WA100 is sufficient for approximately 15m<sup>2</sup> at a continuous 1mm bed thickness. The coverage will vary depending on substrate condition, tile type and application technique.

### **PACKAGING**

ARDEX WA100 is packed in plastic pails – net volume 10L Part A and 10L Part B.

### **SHELF LIFE**

ARDEX WA100 has a shelf life of not less than 24 months

when stored in the original unopened packaging, in a dry place at 23°C and 50% relative humidity. Keep away from flames and high temperatures. Keep away from food and drink. Reseal partly used containers.

### **Pay attention to the following:**

Ensure the tile or stone is suitable for vertical and exterior applications, or other intended applications. For sandstone, slate and fissile stone contact ARDEX Technical Services.

Familiarise yourself and comply with maximum height restrictions when using ARDEX WA100.

When fixing white or translucent marble, it is recommended not to spot fix due to the possibility of the adhesive being visible.

Protect the finished surface from traffic during cold weather until ARDEX WA100 has fully cured.

For facades and applications involving heavy tile or stone on the wall, we strongly recommend the use of additional mechanical fixing.

For fully immersed applications we recommend a minimum cure time of 48 hours at 23°C and 50% relative humidity.

## SAFETY PRECAUTIONS

Avoid contact with skin and eyes; in case of contact with the eyes, rinse immediately with plenty of water for 15 minutes and seek medical advice; wear suitable gloves and eye protection and keep the product out of the reach of children. Use only in well ventilated areas and wear appropriate respiratory equipment to avoid breathing vapour and fumes. If swallowed do not induce vomiting, give a glass of water to rinse mouth, then as much water as the patient can drink and contact a doctor. If skin contact occurs, remove contaminated clothing and wash skin thoroughly with warm soapy water.

ARDEX WA 100 Part A is considered an environmentally hazardous substance under UN 3082 Environmentally Hazardous Substance N.O.S Packaging Group III Hazchem 3Z.

For further material safety data, consult the latest Material Safety Data Sheet.

## TECHNICAL DATA

### Identity

**Part A Resin:** White paste  
**Part B Hardener:** Off white paste  
**Mixing Ratio:** 1:1 Part A: Part B by volume

### Application Properties at 23°C and 50% RH

**Adjustment Time:** 45 minutes  
**Drying/Grouting Time:** 8 hours  
**Pot Life:** 45 minutes  
**Open Time:** 45 minutes

### Mechanical Properties (AS 4992)

**Shear Adhesion Strength after**  
**7 Days Dry:** > 2.0 MPa  
**Water Immersion:** > 2.0 MPa  
**Thermal Shock:** > 2.0 MPa  
**Classification:** R2 T

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### DISCLAIMER

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