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# ARDEX S 16

## Rapid Hardening and Rapid Drying Tile and Natural Stone Adhesive

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Ideal for natural stones – reduced risk of water staining, warping and curling

Rapid drying – can be trafficked and grouted 2 to 3 hours after fixing

Suitable for fixing porcelain and fully vitrified tiles

No lipping of floor tiles – level finish of floor tiles, especially polished porcelain

ARDEX S16W is ideal for fixing translucent marble, glass mosaics and other natural stone tiles

For internal use on walls and floors

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

**RAPIDRY**



**FORMULA**

What is the Rapidry Formula?

**It is the ability of the mortar to totally bind the water used for mixing, virtually eliminating the risk of water staining.**



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# ARDEX S 16

## Rapid Hardening and Rapid Drying Tile and Natural Stone Adhesive

### DESCRIPTION

ARDEX S16 is a special rapid hardening and drying, cement-based adhesive. It is ideal for use in situations where the adhesive bed has to dry quickly or the tiling has to be grouted and put into use shortly after fixing.

ARDEX S16W (White) is particularly suitable for tiling in situations where residual moisture could cause efflorescence and water marks on certain natural stone tiles.

ARDEX E90 mortar admix is recommended where movement is anticipated. It also allows direct fixing over existing clean glazed surfaces without the need for priming or mechanically grinding the glaze, in areas that do not come into contact with water.

ARDEX S16 is suited for use in internal areas that are not permanently wet. Do not use in swimming pools or external areas.

### FOR FIXING (TILE TYPES)

Fully vitrified and ceramic tiles, porcelain, concrete stone tiles e.g. terrazzo, natural stones\*, glass and porcelain mosaics.

\*ARDEX S16W can be used for fixing low to medium dimensionally sensitive stone. For details please refer to Technical Bulletin TB010 – Fixing of Moisture Sensitive Stone/Marble.

ARDEX S16W (white) for translucent tiles, glass, mosaics, limestone, travertine, marble and other natural stone.

### TO (SUBSTRATES)

Concrete, renders, screeds  
Medium density fibre-cement sheets on walls and plasterboard (with ARDEX E90).  
Existing ceramic (with ARDEX E90)  
Autoclaved aerated concrete (AAC)  
Compressed fibre-cement sheet on floors (with ARDEX E90)

### 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 strong enough to support the weight of the tiles 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. Prime porous substrates with ARDEX Multiprime.

### 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 should be true and level. 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 should be pitched to drains where required. Allow at least 7 days to cure prior to tiling. Mix with ARDEX E90 when using over heated flooring screeds.

### Plasterboard/Fibre-cement Sheet

Tiles can be fixed directly provided these boards are firmly and rigidly fixed in accordance with manufacturer's instructions to adequately support the tile bed. Priming is recommended for fibre-cement sheet but is not usually necessary for plasterboard except when jointing compound is used. Mix ARDEX S16 with ARDEX E90 when tiling over these substrates.

### Existing Ceramic Tiles

These include sound, clean, glazed and unglazed tiles. If the area to be tiled will not be in contact with water, tiles can be directly fixed using ARDEX S16 mixed with ARDEX E90 without mechanically grinding the glaze. In all other situations the tiles must be mechanically roughened to remove 80% of the glaze. All dust and contamination should be removed before tiling.

### MIXING

ARDEX S16: 20kg powder to 5 litres water  
ARDEX S16W: 20kg powder to 5.2 litres water.  
When using ARDEX E90 admix, first dilute the admix 1:1 with water.

ARDEX S16/S16W: 20 kg powder to 3 litres of ARDEX E90 to 3 litres of water.

The working time of the mixed mortar is approximately half an hour at 23°C. The working time and strength development will be retarded at lower temperatures and accelerated at high. Do not apply at temperatures below 5°C.

### FIXING TECHNIQUE

Before fixing ensure the substrate has been prepared and the tiles are free from dust. Tiles should be fixed in accordance with Australian Standard AS 3958.

Substrate surface, type and size of the tiles will determine the selection of the trowel. As a general guide use a 6 x 6 x 6mm notch trowel for walls and 10 x 10 x 10mm notch trowel for floor tiling. ARDEX S16 can be applied at a bed thickness greater than 3mm or less than 10mm.

The tiles must be pressed firmly into the freshly combed mortar bed to ensure good contact with the mortar. Slide the tile at right angles to the notch pattern to ensure 100% coverage on the back of the tile. Tiles with ribbed or keyed back profiles should also be buttered to ensure complete coverage. Lift a tile from time to time to check that there are no voids beneath the tile. Do not spot fix. Any surplus adhesive must be removed from the surface of the tile and joints, before the adhesive sets.

ARDEX S16 has an open time of 10 minutes and adjustment time of 10-15 minutes. Please be aware of site conditions when considering these times and only spread enough adhesive so that the tiles can be fixed while the mortar is still wet. All tools should be cleaned with water immediately after use.

### MOVEMENT JOINTS

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

### GROUTING

Grouting can proceed once the tile bed has hardened sufficiently so that tiles will not be dislodged. Grouting and traffic may be allowed after approximately 2 - 3 hours at 23°C and 50% relative humidity. Allow longer for dense tiles/substrates, humid climates and low temperatures.

The tile joints should be grouted with the appropriate ARDEX grout.

### COVERAGE

20kg of ARDEX S16 is sufficient for approximately 7m<sup>2</sup> on walls, using a 6 x 6 x 6mm notched trowel and 5m<sup>2</sup> on floors using a 10 x 10 x 10mm notched trowel. The coverage will vary depending on substrate condition, tile type and application technique.

### PACKAGING

ARDEX S16 is packed in polylined paper sacks – net weight 20kg.

### SHELF LIFE

ARDEX S16 has a shelf life of not less than 12 months when stored in the original unopened packaging, in a dry place at 23°C and 50% relative humidity.

### PRECAUTIONS

This product is considered non-hazardous in normal usage. However the presence of cement in the product gives an alkaline mortar which may cause some irritation if prolonged contact with skin takes place.

Avoid contact with skin and eyes; in case of contact with the eyes, rinse immediately with plenty of water and seek medical advice; wear suitable gloves and keep the product out of the reach of children.

Avoid generation of airborne dust during mixing.

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

### TECHNICAL DATA

<b>Colour:</b>	S16 – grey S16W – white
<b>Mixing ratio (per 20kg):</b>	S16 – approx 5L water S16W – approx 5.2L water

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

**Working time:** 30 mins

**Open time:** 10 minutes

### Mechanical Properties (AS 4992)

#### Tensile Adhesion Strength after

**1 day dry:** 1.6 MPa

**28 days dry:** 1.7 MPa

**Classification:** C2FT

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