



254

254 thin-set adhesive is the ultimate one-step, polymer fortified, product for interior and exterior installation of ceramic tile, reduced thickness porcelain, stone, quarry tile, pavers and brick. 254 adhesive is designed to just mix with water, has a long open time with unsurpassed adhesion and workability. May be mixed with PERMACOLOR® Select pigment packs for a coloured adhesive.

**Globally Proven
Construction Solutions**



Contractor: The Orchid Group
Artist: Valmai Pollard, "Wild Flowers"
Location: Shield St, Cairns, QLD



FEATURES/BENEFITS

- Interior and exterior use
- High performance flexible cement based adhesive
- High tack, non sag
- Extended open time
- Easy to use – plastic and workable

SUITABLE SUBSTRATES

- Concrete
- Concrete masonry
- Cement mortar beds
- Cement plaster
- Ceramic tile and stones
- Suitable waterproof membranes
- Brick masonry
- Cement terrazzo
- Gypsum wall board[^]
- Cement backer board^{**}
- Plastic laminate[^]
- Properly prepared vinyl tile[^]
- Cut-back adhesives[^]
- Exterior glue plywood[^]

[^] Interior use only

^{**} Consult cement backer board manufacturer for specific installation recommendations and to verify acceptability for exterior use.

USES

Excellent for exterior and underwater applications as well as providing superior bond to exterior glue plywood (interior only) and concrete. Superior bond to masonry. The ultimate thin-set adhesive for reduced thickness porcelain, ceramic and glass tile.

PACKAGING/COLOUR

- 20 kg bag; 56 bags per pallet
- Off-White or White Cement

MANUFACTURER

LATICRETE Australia Pty Ltd
29 Telford Street
Virginia, QLD 4014 Australia

Telephone: 07 3865 1599
Toll Free: 1800 331 012
Fax: 07 3865 2250
Internet: www.laticrete.com.au

Approximate Coverage

(Based on product wet densities with a trowel at 45°)

- 7.5 – 8.5 m² with a 6 mm x 6 mm square notched trowel
- 4.5 – 5.5 m² with a 10 mm x 10 mm square notched trowel

Coverage will depend on how the trowel is used and surface regularity.

Shelf Life

Factory sealed containers of this product are guaranteed to be of first quality for one (1) year* if stored off the ground in a dry area.

* High humidity will reduce the shelf life of bagged product.

Limitations

- Not for direct use over hardwood or strip wood flooring, particle board, Luan plywood or Masonite®.
- Not for use over expansion joints or structural movement cracks.
- Adhesives/mastics, mortars and grouts for ceramic tile, pavers, brick and stone are not replacements for waterproof membranes. When a waterproof membrane is required, use a LATICRETE Waterproof Membrane.
- Note:** Surfaces must be structurally sound, stable and rigid enough to support ceramic/stone tile, thin brick and similar finishes. Substrate deflection under all live, dead and impact loads, including concentrated loads, must not exceed L/360 for thin bed ceramic tile/brick installations or L/480 for thin bed stone installations where L = span length.

Cautions

- Consult SDS for more safety information.
- During cold weather, protect finished work from traffic until fully cured.
- Use white adhesive for installing white or light coloured marble or stone.
- This is not a colour controlled product and may not be suitable where specific white or off-white coloured adhesives are required.
- Use LATAPOXY 300® Adhesive for resin backed tile or stone, installing green marble or water sensitive stone, agglomerates or tile.
- Wait 14 days @ 21°C after final grouting before filling water features and pools.
- Keep out of reach of children.
- Contains Portland cement and silica sand. May irritate eyes and skin. Avoid contact with eyes or prolonged contact with skin. In case of contact, flush thoroughly with water. Use rubber gloves and eye protection when handling product.
- Do not take internally. Silica sand may cause cancer or serious lung problems.
- Avoid breathing dust. Wear an approved respirator in dusty areas.
- Efflorescence is a normal condition of Portland cement. Contact LATICRETE for information on reducing the effects of efflorescence.

TECHNICAL DATA

VOC Product Information

Green Building Council of Australia Green Star Office Design. VOC: <1 gram/Litre

Applicable Standards

When tested in accordance with AS ISO 13007.1 & 2 is classified as a C2TES2P2.

ANSI A118.4, ANSI 118.11, ANSI 118.15

Note: Tested with 18 mm CD A bond Radiata Plywood.

Physical Properties

TEST	TEST METHOD	RESULT
28 day Tensile strength	AS ISO 13007.1 & 2	>2MPa
Water immersion	AS ISO 13007.1 & 2	>1MPa
Heat Ageing	AS ISO 13007.1 & 2	>2MPa
Transverse deformation	AS ISO 13007.1 & 2	>5 mm

Test	Test Method	Results	Specification
28 day Cure Porcelain Tile Shear Strength	ANSI A118.15 7.2.5	3.3–4.0 MPa	>2.76 MPa
Shear Bond Porcelain Tile Water Immersion	ANSI A118.15 7.2.4	1.7-2.4 MPa	>1.38 MPa
28 day Heat Aging Tile Shear Strength	ANSI A118.15 7.2.7	4.1-4.8 MPa	>2.76 MPa
28 day Cure Quarry Tile to Plywood Shear Bond	ANSI A118.11 4.1.2	1.7-2.1 MPa	>1.0 MPa

Working Properties at 21°C

PROPERTY	VALUE
Open Time	≥30 minutes
Pot Life	3 hours
Time to Heavy Traffic	24 hours
Wet Density	1600 kg/m ³

Specifications subject to change without notification. Results shown are typical but reflect test procedures used. Actual field performance will depend on installation methods and site conditions.

INSTALLATIONS

Unless otherwise stated in this document, LATICRETE technical data sheets and guidelines, all work should be in accordance with AS3958.1 -2007.

Surface Preparation

All surfaces should be between 4°C and 32°C and structurally sound, clean and free of all laitance, dirt, oil, grease, loose peeling paint, concrete sealers or curing compounds. Rough or uneven concrete surfaces should be made smooth with a LATICRETE Latex Portland Cement underlayment to provide a floated finish, CSP1 to CSP3. Dry, dusty concrete slabs or masonry should be dampened and excess water swept off. Installation may be made on a damp surface. 254 adhesive does not require a minimum cure time for concrete slabs however additional movement joints should be considered for more than normal shrinkage and creep. All substrates must be plumb and true to the required tolerances based on format size of tile.

Concrete Surface Profile should be between the ranges of CSP1 to CSP 3. Expansion joints shall be provided through the tile work, over all construction or expansion joints in the substrate. Follow Australian Standards requirements for Expansion Joints in AS3958.1 and 2. Do not cover expansion joints with adhesive.

Mixing

Place potable water into a clean pail and add 254 powder. Mix by hand or with a slow speed mixer to a smooth, trowelable consistency. Use approximately 4.6 – 5.2 litres of water per 20 kg bag for normal consistency thin-set. Allow adhesive to slake for 5-10 minutes. Remix without adding any more water or powder. During use, stir occasionally to keep mix fluffy. Do not temper with water.

Note: For a slurry bond coat; mix 5.8 – 6 litres of water to a 20 kg bag of 254. Refer to TDS1009 for more information.

For reduced thickness porcelain adhesive; mix 5.2 – 5.6 litres to a 20 kg bag of 254 adhesive – ensure notched ridges still stand.

For coloured adhesives mix with 2 boxes (4 individual pigment pouches) of PERMACOLOR® Select pigment packs for each 20 kg bag of 254 adhesive, White only. Check to ensure colour match and acceptability with grout prior to use.



CSP1 to CSP3

Application

Apply the adhesive to the substrate with the flat side of the trowel, pressing firmly to work into surface. Comb on additional adhesive with the notched side. **Note:** Use the proper sized notched trowel to insure full bedding and appropriate adhesive thickness under tile. Spread as much adhesive as can be covered with tile in 10-15 minutes or whilst adhesive is wet and tacky. Back butter large tiles > 200 mm x 200 mm to provide full bedding and firm support if required. Place tiles into wet, sticky adhesive and beat in using a beating block and rubber mallet to imbed tile and adjust level. Check adhesive for complete coverage by periodically removing a tile and inspecting bedding adhesive transfer onto back of tile. If the adhesive is skinned over (not sticky), remove and replace with fresh adhesive.

Grouting

Grout after a minimum of 24 hours curing at 21°C using PERMACOLOR® Select Grout; PERMACOLOR Grout; PERMACOLOR NS Grout; or, Smooth Grout. For greater stain & chemical resistance use SPECTRALOCK PRO Premium Grout or other LATAPOXY Grouts. For further information see TDS1400.

Tile on Tile work

Existing ceramic tile must be firmly bonded to rigid floor construction. Tiled surfaces to receive tile must be prepared; shiny and highly glossed glazes should be removed by scarification; always cleaned to remove grease, wax, oil or any other contamination that will inhibit bond; clean with alkaline solutions like Tri-sodium Phosphate (TSP) or electric dishwasher powder and hot water after surface preparation (follow cleaning agent manufacturers safe use instructions) as required and rinsed with clean water and allowed to dry after cleaning.

Apply a continuous skim coat, nominally 1.5 mm thick, of adhesive and vigorously work into the surface before combing additional adhesive over the skim coat using the appropriate sized trowel to suit the bedding requirements of the tile or panel.

Cold Weather Note

The setting of Portland cement adhesives, mortars and grouts are retarded by low temperatures. Protect finished work for an extended period when installing in cold weather. For faster setting adhesives use LATICRETE Rapid Setting Thin- Set Adhesives and Additives. Do not set tile when surface temperature is below freezing or when substrate is frozen.

Hot Weather Note

The evaporation of moisture in Portland cement adhesives, mortars and grouts is accelerated by hot, dry conditions. Apply to dampened surfaces and protect freshly spread mortar and finished work when installing in temperatures over 35°C.

Cleaning

Clean tools and tile work with water while adhesive is fresh.

AVAILABILITY AND COST

Availability

LATICRETE and LATAPOXY® materials are available worldwide.

For Distributor information:

Toll Free: 1800 331 012

Telephone: 07 3865 1599

For online distributor information, visit LATICRETE at www.laticrete.com.au

Cost

Contact a LATICRETE Distributor in your area.

MAINTENANCE

LATICRETE and LATAPOXY grouts require routine cleaning with a neutral pH detergent and water. All stone and tiles should be maintained and sealed with STONETECH® products as appropriate for the specific tile / stone and installation situation.

All other LATICRETE and LATAPOXY materials require no maintenance but installation performance and durability may depend on properly maintaining products supplied by other manufacturers.

¹ United States Patent No.: 6,881,768 (and other Patents).

TECHNICAL SERVICES

Technical assistance

Information is available by calling:

Toll Free: 1800 331 012

Telephone: 07 3865 1599

Fax: 07 3865 2250

Technical and safety literature

To acquire technical and safety literature, please visit our website at

www.laticrete.com.au

DISCLAIMER

- The information contained in this document is given in good faith and to the best of our knowledge is true and accurate.
- This information is subject to change without notice and it is the responsibility of the user to obtain up to date and current information.
- The use of this product is beyond our control and LATICRETE is not responsible for any loss or damage arising from the incorrect use of this product.
- Efflorescence is a normal condition of Portland cement and is not covered by any warranty. The use of LATAPOXY 310 Stone Adhesive, LATAPOXY 300 Adhesive, LATAPOXY SP-100, SPECTRALOCK® PRO Premium Grout[†] and SPECTRALOCK 2000IG will not contribute to any noticeable efflorescence.

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