



Globally Proven
Construction Solutions

345 Super Flex (Formerly known as 254 Platinum C2TES2)

345 Super Flex is an ultra pro premium multi-purpose adhesive, fortified with polymers to give it high deformability. 345 Super Flex can be used on walls and floors as thin bed adhesive for interior and exterior installation of ceramic tile, porcelain tile, and natural stone. 345 Super Flex designed to just mix with water, has a long open time with exceptional adhesion and workability.



FEATURES/BENEFITS

- Ideal for thin porcelain tile, thin porcelain tile panels
- Suitable for natural stones, porcelain, and ceramic tiles.
- Tile over existing ceramic, porcelain & stone surface*.
- Equipped with anti-microbial technology.
- Ultimate adhesion for porcelain and glass tiles.
- Incredible bond to exterior glue plywood* and concrete*.
- Superior for exterior and submerged applications.
- High shear bond strength.
- Smooth creamy formula.

*See limitations, Contact our technical service for more information.

MANUFACTURER

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USES

- Interior and exterior
- Submerged applications
- Provides superior bond to exterior glue plywood (interior only) and concrete.
- Ultimate thin-set for porcelain, thin porcelain, and glass tiles
- External cladding of large format tile / stone

STANDARDS

Applicable Standards

- Exceeds ANSI A118.4, A118.11 and ANSI A118.15
- Conforms to EN 12004, ISO 13007 with a classification of **C2TES2**.

Please see the technical data

Packaging: 20 Kg bag, Pallet: 72 bags per pallet

Color: Grey and White

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.

Suitable Substrates

- Concrete/Masonry
- Existing Ceramic Tile and Stone
- Concrete Block
- Cement Plaster
- Cement Beds
- Non-Water-Soluble Cut-Back Adhesive
- Cement Terrazzo
- Cement Backer Boards[^] (Consult cement backer board manufacturer for specific installation recommendations and to verify acceptability for exterior use)
- Gypsum Wallboard (Interior use only, non-wet areas)
- Gypsum Plaster*
- Plastic Laminate[^]
- STRATA_MAT™
- HYDRO BAN® Board (Consult Hydro Ban Board datasheet (for specific installation recommendations)
- Exterior Glue Plywood (Interior only)[^]
- Properly Prepared Vinyl Tile (Interior only)[^]

[^] Recommended to consult LATICRETE MEA technical dept before the installation.

Coverage (Approximate)

- 6.0–7.25 m²/ 20 kg bag with 6mm x 6mm notched trowel.
- 5.5 - 6.75 m²/ 20 kg bag with 6mm x 9 mm notched trowel.
- 3.0 - 3.5 m²/ 20 kg bag with 12 mm x 12 mm notched trowel.

NOTE: Coverage will vary depending on trowel notch size, type and size of tile and substrate. For Installing STRATA_MAT™ or HYDRO BAN® Sheet Membrane approximately 8.5 - 9.3m² / 20 kg bag with 6mm x 6mm notched trowel

Limitations

- For veneer installations using this product, consult local building code requirements regarding limitations and installation system specifications.
- Not for use directly over particle board, luan, Masonite® or hardwood floors.
- Adhesives/mastics or grouts for ceramic tile, pavers, brick and stone are not replacements for waterproofing membranes. When a waterproofing membrane is required, use a LATICRETE® Waterproofing 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 (except where local building codes specify more stringent deflection requirements)

Cautions

- Consult SDS for more safety information.
- Some marbles and other stone have low flexural strength and may not be suitable for installation over wood floors.
- During cold weather, protect finished work from traffic until fully cured.
- 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.
- Wait 14 days after the final grouting period before filing water features with water at 21°C
- DO NOT take internally. Avoid breathing dust. Wear a respirator in dusty areas.
- For white and light-colored marbles use 345 Super Flex WHITE. For green marble, resin backed tile and stone and other moisture sensitive marbles and agglomerates, Use LATAPOXY® 300 Adhesive (refer to Data Sheet)
- Some marbles and other stone have low flexural strength and may not be suitable for installation over wood floors.
- Keep out of reach of children.

TECHNICAL DATA

Certification/ Approvals

Total VOC Content of product in unused form is 0.00 g/L.: This product has a cradle-to-gate (with options) Product-Specific (Type III) Environmental Product Declaration. The PCR review, life cycle assessment and declaration were independently verified by UL Environment in accordance with ISO 14025, ISO 14040 and ISO 14044.

Physical Properties

	Test Method	Results	Specification
7 days- Porcelain Tile Shear Strength	ANSI A118.15 7.2.3	350–450 psi (2.4 – 3.1 MPa)	>300 psi (2.07 MPa)
7 days water immersion - Porcelain Tile Shear Strength	ANSI A118.15 7.2.4	250-300 psi (1.7 - 2.0 MPa)	>200 psi (1.38 MPa)
28 days- Porcelain Tile Shear Strength	ANSI A118.15 7.2.5	500-900 psi (3.4 – 6.2 MPa)	>400 psi (2.76 MPa)
28-day Heat Aging-Porcelain Tile Shear Strength	ANSI A118.15 7.2.7	500-600 psi (3.4 – 4.1 MPa)	>400 psi (2.76 MPa)
28-day Cure Quarry Tile to Plywood Shear Bond	ANSI A118.11 4.1.2	174- 290 psi (1.2 – 2.0 MPa)	>150 psi (1.0 MPa)

Test (Curing Parameter)	Test Method	EN 12004-1 C2 Specification	Results
Tensile Adhesive Strength (28 Day Cure)	EN 12004-2, 8.3	1 MPa (145 psi)	1.2 – 2.2 MPa (174 - 319 psi)
Tensile Adhesive Strength (7 Day Cure 21 Day Water Immersion)	EN 12004-2, 8.3	1 MPa (145 psi)	1.0 – 2.0 MPa (145 - 290 psi)
Tensile Adhesive Strength (14 Day Cure 14 Day Heat Aging)	EN 12004-2, 8.3	1 MPa (145 psi)	1.2 – 2.4 MPa (174 - 348 psi)
Tensile Adhesive Strength (7 Day Cure 21 Day Water Immersion then 25 Freeze/Thaw Cycles)	Change: EN 12004-2, 8.3	1 MPa (145 psi)	1.2 – 2.0 MPa (174 - 290 psi)
Open Time After 30 Minutes (E-extended open time)	EN 12004-2, 8.1	0.5 MPa (73 psi)	0.8- 1.2 MPa (116 – 174 psi)
Slip (T)	EN 12004-2, 8.2	Less than or equal to 0.5 mm (0.02 inches)	< 0.5 mm (0.02 inches)
Transverse Deformation S2 (Highly deformable adhesive)	EN 12004-2, 8.6	S2 (≥ 5 mm (0.2 inch))	8 - 14 mm (0.30 - 0.55 inch)

Working Properties (23 ± 20C and 50 ± 5% RH)

Open Time	30 minutes
Pot Life	2 hours
Time to Heavy Traffic	24 hours
Wet Density	11.7 lb/gal. (1.40 g/cm ³) approx.

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.

INSTALLATION

Surface Preparation All surfaces should be between 4°C and 32°C and structurally sound, clean and free of all dirt, oil, grease, paint, concrete sealers or curing compounds. Rough or uneven concrete surfaces should be made smooth with Latex Portland Cement Underlayment to provide a wood float (or better) finish. Dry, dusty concrete slabs or masonry should be dampened, and excess water swept off. Installation may be made on a damp surface. Concrete slabs must be plumb and true to within 6 mm in 3m.

Note: 345 Super Flex does not require a minimum cure time for concrete slabs. Expansion joints shall be provided through the tile work from all construction or expansion joints in the substrate. Follow ANSI specification A108.01-3.7 "Requirements for Movement Joints: Preparations by Other Trades" or TCNA detail EJ-171 "Movement Joints—Vertical & Horizontal". Do not cover expansion joints with adhesive.

1. Installer must verify that deflection under all live, dead and impact loads of interior plywood floors does not exceed industry standards of L/360 for ceramic tile and brick or L/480 for stone installations where L=span length.

2. Minimum construction for interior plywood floors.
SUBFLOOR: 15 mm thick exterior glue plywood, either plain with all sheet edges blocked or tongue and groove, over bridged joints spaced 400 mm o.c. maximum; fasten plywood 150 mm o.c. along sheet ends and 200 mm o.c. along intermediate supports with 8d ring-shank, coated or hot dip galvanized nails (or screws); allow 3 mm between sheet ends and 6 mm between sheets edges; all sheet ends must be supported by a framing member; glue sheets to joints with construction adhesive.

UNDERLAYMENT: 15 mm thick exterior glue plywood fastened 150 mm o.c. along sheet ends and 200 mm o.c. in the panel field (both directions) with 8d ring-shank, coated or hot dip galvanized nails (or screws); allow 3 mm to 6 mm between sheets and 6 mm between sheet edges and any abutting surfaces; offset underlayment joints from joints in subfloor and stagger joints between sheet ends; glue underlayment to subfloor with construction adhesive. Refer to Technical Data Sheet 152 Bonding Ceramic Tile, Stone or Brick over Wood Floors for complete details.

Mixing

Place clean, potable water into a clean pail. Use approximately 4.0 – 4.2 L of water for 20 kg of powder. Water mix ratio can be adjusted according to surface temperature and type of substrate. When using to install Large Thin Porcelain Tile use up to 4.2 L of water for 20 kg of powder.

Add 345 Super Flex. Mix by hand or with a slow speed mixer to a smooth, trowelable consistency. Allow adhesive to slake for 5–10 minutes. Remix with out adding any more water or powder. During use, stir occasionally to keep mix fluffy. DO NOT temper with water.

Application

Apply 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 proper sized notched trowel to ensure full bedding of the tile. Spread as much adhesive as can be covered with tile in 15–20 minutes. Back butter large tiles >200 mm x 200 mm to provide full bedding and firm support. Place tiles into wet, sticky adhesive and beat in using a beating block and rubber mallet to

embed tile and adjust level. Check adhesive for complete coverage by periodically removing a tile and inspecting bedding adhesive transfer onto back of tile. If adhesive is skinned over (not sticky), remove and replace with fresh adhesive.

Grouting

Grout installation after a minimum of 24 hours curing time at 21°C. see the Recommended LATICRETE Grout chart below:

Grout	Type	Mixing
SPECTRALOCK® Pro Premium Grout†	Epoxy Based	Part A+B+C
PERMACOLOR® Grout [^] / PERMACOLOR® Select [*]	Cementitious	Mix with water
1500 Sanded Grout / 1600 Unsanded Grout	Cementitious	Mix with 1776 Grout Enhancer or with water.

To discover more about our recommended LATICRETE grout products tailored to your specific needs, please contact our technical service team by phone or email at technicalservice@laticrete.me.

^{*}PERMACOLOR Select selling with Color Packs and 11.3 kg of Grout Base

[†]United States Invention Patent No.: 6881768 (and other Patents).

[^]United States Invention Patent No.: 6784229 (and other Patents).

Cleaning

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

AVAILABILITY AND COST

Availability

LATICRETE® materials are available worldwide.

For distributor information,

please contact us by email at: enquiry@laticrete.me

or, visit www.laticrete.me

Cost

Contact a LATICRETE® closer distributor to obtain complete information and cost.

WARRANTY

The supplier warrants this product will not deteriorate under normal conditions and use, the warranty validity of one (1) year. The product subject to the terms and conditions stated in the LATICRETE® Product Warranty. Please consult our technical support for further information

TECHNICAL SERVICES

Technical assistance

For information contact us by email at:

enquiry@laticrete.me

Technical and safety literature

To obtain technical and safety literature, please visit our website at: www.laticrete.me

Warning: The information and the instructions in the data sheet, although based on knowledge gained through years of applications, are indicative. LATICRETE® unable to directly control the installation conditions and modalities of application of products, do not assume any liability arising from their implementation. Those who want to use the LATICRETE® products must conduct adequate tests to determine the site specifications. Results shown are typical but reflect test procedures used. Actual field performance will depend on installation method and site conditions.