

# TILE ADHESIVE DIAMOND

HIGH-PERFORMANCE POLYMER MODIFIED CEMENTITIOUS TILE ADHESIVE (TYPE III 'T' / C2TE) FOR VITRIFIED TILES AND NATURAL STONES OF ANY SIZE WITH EXTENDED OPEN TIME AND NO VERTICAL SLIP

## DESCRIPTION

**Tile Diamond** is an advanced cementitious adhesive offering a prolonged open time and preventing vertical slip. Tile Diamond is suitable for fixing large ceramic tiles, vitrified tiles, glass mosaics, and natural stone. It is appropriate for residential, commercial, and industrial applications in both dry and wet conditions, with a maximum thickness of 10 mm. It can be used both indoors and outdoors.

## USES

- All kinds of medium and large size tiles
- All type of ceramic tile, terracotta, pavers, brick, vitrified tiles, large format tiles, precast terrazzo, natural stones and low thickness slabs

## APPLICATION AREAS

- Balconies
- Wet areas
- Bathroom
- Swimming pools
- Residential and commercial areas
- Façade
- Kitchen

- Terrace
- Industrial floors
- Heavy trafficked floors
- Tile on tile

## SUBSTRATES

- Cement based screeds/beds
- Cement based plaster/renders
- Concrete
- Existing tiles and stones
- Brick masonry
- Gypsum fibre boards
- Calcium sulphate screeds

\*Use Nerolac Perma Tile Bond as a primer for the application on calcium sulphate screeds and gypsum fibre boards.

## PRODUCT FEATURES

- Can be used in wet areas
- High bond strength
- Extended open tile
- Reduced vertical slip
- Easy to use
- Self-curing
- Stronger adhesion than conventional cement-based mortar
- Can be used for wet rooms, toilets, showers, kitchens, spa, fountains and laundries

## PRODUCT INFORMATION

<b>Chemical base</b>	Portland cement, polymers, selected aggregates and additives
<b>Packaging</b>	20 Kg
<b>Shelf life</b>	12 months from the date of manufacturing
<b>Storage conditions</b>	Product must be stored in original, unopened and undamaged sealed packaging in dry condition temperature between +5 °C to 35 °C
<b>Appearance</b>	Free flowing grey/white powder
<b>Standard compliance</b>	Type III 'T' (IS 15477:2019) & C2TE* (EN 12004:2017)

\*Tensile adhesion strength test after freeze thaw cycles not concluded due to tropical climatic condition.

# TILE ADHESIVE DIAMOND

## APPLICATION INFORMATION

Mixing ratio	Packing	Water: powder ratio by weight	Quantity of water per bag
	20 Kg grey	0.25-0.28	6.25-7.0 L
	20 Kg white	0.27-0.29	6.75-7.25 L

Fresh mortar density	1.7 – 1.9 Kg/L
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**Consumption** Consumption is dependent on the substrate, surface profile, roughness, application technique, tile type, tile size and trowel notch size. (As a guide for a single adhesive layer)

Size of tiles	Bed thickness	Dry Powder Consumption (Grey)	Dry Powder Consumption (White)
Small	3 mm	2.50 - 3.00 Kg/m <sup>2</sup>	2.75 - 3.25 Kg/m <sup>2</sup>
Medium	4 mm	3.00 – 3.50 Kg/m <sup>2</sup>	3.50 – 4.00 Kg/m <sup>2</sup>
Large	5 mm	3.75 – 4.25 Kg/m <sup>2</sup>	4.25 – 4.75 Kg/m <sup>2</sup>

Coverage	
Pack	Area covered
20 Kg	5 – 6 m <sup>2</sup> at 3 mm thickness

Layer thickness	Min 3 mm – Max 12 mm
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Ambient air temperature	+5 °C - +45 °C
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Substrate temperature	+5 °C - +45 °C
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Maturing time	~5 minutes
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Pot life	~120 minutes (100 gm powders at +27 °C)
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Open time	25 – 30 minutes
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Adjustability time	35 – 40 minutes
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Applied product ready for use	Use	Waiting time
	Grouting Floor/walkable	24 – 36 hours
	Grouting walls	4 – 6 hours
	Full traffic	~14 days
	Water immersion	~21 days

Values determined at the laboratory conditions: 23 °C ± 2 °C, R.H. 50 % ± 5 %. Higher temperatures will reduce the indicated waiting times, lower temperatures increase them.

Protect form adverse weather conditions, such as extremely high or low (freezing) temperatures, rain, for at least 12-24 hours from application.

# TILE ADHESIVE DIAMOND

## TECHNICAL INFORMATION

Requirements as per IS 15477:2019 -

TEST PARAMETERS	IS 15477:2019	RESULTS
Tensile Adhesion strength, after 28 days		
Dry condition	$\geq 1.5 \text{ N/mm}^2$	1.5 – 1.6 N/mm <sup>2</sup>
Wet condition	$\geq 1.0 \text{ N/mm}^2$	1.2 – 1.4 N/mm <sup>2</sup>
Shear adhesion strength		
Dry condition	$\geq 1.5 \text{ N/mm}^2$	1.5 – 1.6 N/mm <sup>2</sup>
Wet condition	$\geq 1.0 \text{ N/mm}^2$	1 – 1.2 N/mm <sup>2</sup>
Heat ageing	$\geq 1.0 \text{ N/mm}^2$	1.2 – 1.4 N/mm <sup>2</sup>
Slip	$\leq 0.5 \text{ mm}$	$\leq 0.5 \text{ mm}$

Requirements as per EN 12004:2017 -

TEST PARAMETERS	EN 12004:2017	RESULTS
Tensile Adhesion strength, after 28 days		
Dry condition	$\geq 1.0 \text{ N/mm}^2$	1.2 – 1.4 N/mm <sup>2</sup>
Wet condition	$\geq 1.0 \text{ N/mm}^2$	1 – 1.2 N/mm <sup>2</sup>
Heat ageing	$\geq 1.0 \text{ N/mm}^2$	1 – 1.2 N/mm <sup>2</sup>
Tensile adhesion strength after freeze-thaw cycle	$\geq 1 \text{ N/mm}^2$ after not less than 20 minutes	1 – 1.2 N/mm <sup>2</sup>
Extended open time, Tensile adhesion strength	$\geq 0.5 \text{ N/mm}^2$ after not less than 30 minutes	0.5 – 0.8 N/mm <sup>2</sup>
Slip resistance	$\leq 0.5 \text{ mm}$	$\leq 0.5 \text{ mm}$

\*Values determined at the laboratory conditions: 23 °C  $\pm$  2 °C, R.H. 50 %  $\pm$  5 %, results may vary based on site conditions, contact Kansai Nerolac Paints technical team for assistance.

## APPLICATION PROCESS

### SUBSTRATE PREPARATION

- The substrate must be levelled, cured, undamaged, compact, rigid and free from any deleterious material.
- Dampen the dry surface with water and excess water should be washed off.
- New concrete substrate should be 28 days old before application which will reduce linear shrinkage from tile fixing surface.
- Smooth surfaces should be roughened lightly to improve adhesion.
- Expansion joints to be provided and filled with suitable sealant.
- For applications in hot climate or on absorbent substrates, thoroughly pre-dampen the surface immediately prior to product application. Avoid any ponding/standing water on the surface. Surface must not be damp to touch.

- If waterproofing layer required, cement based, and acrylic based waterproofing products from Nerolac Perma range must be applied to the substrate before tiling.

### MIXING

- Pour the recommended amount of clean cold water into a suitable, clean mixing container.
- Slowly add Tile Gold powder to the water and then mix thoroughly using a low speed (<500 rpm) drill mixer until the material is fully mixed and lump free. Avoid entraining air into the mix by over mixing.
- Allow the product to mature 4-5 minutes before remixing for 30 seconds.
- The finished mix has a creamy consistency, uniformly coloured and is easy to apply and spread.

# TILE ADHESIVE DIAMOND

## APPLICATION

- Tile Diamond is applied using a suitable notch trowel. Apply adhesive on a prepared fixing surface with trowel and comb to the required bed thickness. Coverage on the back of the tile should be 100%.
- Tiling must be carried out on freshly applied adhesive, exerting adequate pressure to ensure complete and uniform contact with the adhesive for optimum bond.
- Check the adhesive ribs periodically, if the skin has formed, remove the dried adhesive and apply fresh adhesive.
- Press the tiles firmly into position, checking periodically that good contact is maintained with the back of each tile and beat it using rubber mallet to imbed tile and just level.
- Adjust the tile if required.
- Clean off surplus adhesive from tile face and between tile joints before the adhesive has dried.
- After the required waiting time apply the appropriate grout into the tile joints.
- For tiles >900 cm<sup>2</sup> (30x30 cm)., the double spreading (buttering technique) is always recommended.
- On cementitious substrates, Tile Diamond can be used for laying non-absorbent tiles indoors up to 24 ft<sup>2</sup> (e.g. 4 ft x 6 ft). On walls up to 8 ft height, non-heated floors and outdoor applications up to 8 ft<sup>2</sup> (e.g. 2 ftx 4 ft).

- Use spacers while laying the tiles to provide tile grout joint between the tiles, remove spacers once adhesive sets firmly.
- Grout installation shall be commenced after minimum 24 hours of curing time.
- Grouting to be done using Nerolac Perma Tile R tone/K tone/R Poxy 2K/R Poxy 3K grouts. (Refer tile grout TDS for more information).

## CLEANING OF THE TOOLS

- Clean all tools and equipment with water immediately after use. Hardened/cured material can only be removed mechanically.

## PRECAUTIONS

- Always add powder to water, do not excess than the recommended.
- Never add cement and sand at site.
- Designer/applicator must use additional mechanical fastening system for extra security for more than 3-meter high.
- Do not use adhesive to correct surface irregularities more than 15 mm.
- For natural stone tiles, always carry out preliminary test application first..

## EHS INFORMATION

Avoid inhalation, eyes and skin contact. In case of contact wash with water and seek medical attention

Refer MSDS for safety measures and precautions while handling Tile Diamond.

## Other Products Categories available

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### Disclaimer:

The product information and application details given by the company has been provided in good faith and is meant to serve only as a general guideline during usage. The performance claims made are based on the tests carried out under controlled conditions and our experience with the type of products, therefore actual performance will depend on local factors prevailing at that point of time. Users are advised to carry-out sample tests by taking trials to ensure the suitability of products for their requirement, prior to full-scale usage of our products. The Company is not liable for factors beyond its control such as application during adverse climatic conditions, use of improper application tools/techniques and surface preparation, any structural defects or the inferior quality of materials other than paints. The warranty/guarantee clauses shall accordingly be amended.