



TILE & STONE FIXING EXPERT



# T01

## NEW CONSTRUCTION TILE ADHESIVE (NCA)

ADHESIVE FOR CERAMIC  
TILES AND FOR NEW FLOOR  
TILES/ STONES



For Internal  
Floor & Wall



Ease of  
Application



No Hollow  
Sound



No Cracking  
of Tiles



Non-Slip  
Adhesive



Low VOC



Available in 20 & 30 kg pack.



# NEW CONSTRUCTION TILE ADHESIVE (NCA)

## DESCRIPTION

Roff New Construction Tile Adhesive is a polymer modified, grey cement-based thin-set tile adhesive for fixing high porosity tiles like ceramic/ clay tiles, terracotta and quarry tiles of regular size. It is suitable for both vertical and horizontal surfaces, over the cementitious substrate for indoor application, in dry as well as wet areas. It also recommended for installation of vitrified tiles on the floor.

## STANDARD COMPLIANCE/ SPECIFICATION

Roff New Construction Tile Adhesive complies to requirements of IS 15477: 2004 - Type 1 & IS 15477 : 2019 - Type 1'T' "Specification for Adhesives for use with Ceramic Tiles and Mosaics."

## AREA OF USE

Material to be fixed	On surface/ substrate	Area of application
All types of ceramic tile, terracotta, brick, vitrified tiles*, natural stones*, large format tile**, class IIa, IIb & III tiles as per IS 13712 : 2006.	Cement-based screeds, cement-based plasters, concrete surfaces, bricks, other cement-based surfaces.	Flooring and walls, for internal applications, for external area**, dry & wet area, domestic applications, commercial applications.

\*only recommended to fix on floor. Consult with Roff technical team for fixing on wall application.

\*\*For all exterior or large format tile installation, mix Roff Bond repair with Roff NCA. Consult with Roff technical team.

## FEATURES AND ADVANTAGES

- Easy to use - just add water on site, ready to use.
- Can be used in internal areas, for floor as well as wall application.
- Water resistant - suitable for wet areas.
- Good adhesive bond strength & Bonds to various cement-based substrates.
- Self-curing properties, which allows hassle-free application with minimum labor.
- Low VOC - for healthy living.

## LIMITATIONS

- Do not apply directly to gypsum plaster or boards, fibre cement boards or other drywall partitions, plywood, chipboard, particleboard, decorative laminates or resilient flooring, metal, plastic, deformable surfaces or subject to vibrations. Use Roff Powerflex/ Masterfix as per application.
- Adhesives for ceramic tile, bricks and stone are not designed as replacements for waterproof coating. Use Roff waterproofing coating before tiling for wet area.
- Do not use for fixing artificial/ nano/ engineered stone/ composites/ metal tile. Use Masterfix for the same.



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## TECHNICAL INFORMATION

### APPLICATION PROPERTIES

Testing Properties	Test Results
Tentative Mixing Ratio (Powder: Water)	3 : 1 by volume 1 : 0.24 by weight
Mixed Density	1.7 - 1.9 kg/ litre
Open Time (IS 15477: 2019)	Approx. 20 minutes
Adjustability (IS 15477: 2019)	Approx. 20 minutes
Pot Life	Approx. 120 minutes
Tensile Adhesion Strength as per EN1348	$\geq 0.5 \text{ N/mm}^2$
VOC Content (EPA 24)	< 4 gm/ kg
Application Temperature (substrates and materials)	5°C to 35°C
Adhesive Thickness	3 - 12 mm
Setting/ Trafficable/ Grouting Time	24 hours

### PERFORMANCE PROPERTIES AS PER IS 15477 : 2004 (TYPE 1)

Testing Properties	Requirement	Test Results
a) Shear Adhesion at Dry condition, 24 hours	$\geq 2.5 \text{ KN}$	4 - 6 KN
b) Shear Adhesion at Dry condition, 14 days	$\geq 8 \text{ KN}$	10 - 12 KN
c) Shear Adhesion at Heat ageing condition	$\geq 4 \text{ KN}$	7 - 9 KN
d) Shear Adhesion at Wet condition	$\geq 4 \text{ KN}$	10 - 12 KN
e) Tensile Adhesion at Dry Condition	$\geq 750 \text{ N}$	1000 - 1400 N
f) Tensile Adhesion at Wet condition	$\geq 450 \text{ N}$	700 - 1000 N

### PERFORMANCE PROPERTIES AS PER IS 15477: 2019 (TYPE 1 'T')

Testing Properties	Requirement	Test Results
a) Tensile Adhesion at Dry Condition	$\geq 0.5 \text{ N/mm}^2$	0.5 - 0.8 N/mm <sup>2</sup>
b) Tensile Adhesion at Wet condition	-	0.5 - 0.8 N/mm <sup>2</sup>
c) Shear Adhesion at Dry Condition	$\geq 1.0 \text{ N/mm}^2$	$\geq 1.0 \text{ N/mm}^2$
d) Shear Adhesion at Wet condition	-	1.0 - 1.4 N/mm <sup>2</sup>
e) Shear Adhesion at Heat Ageing	-	1.1 - 1.5 N/mm <sup>2</sup>
f) Slip Resistance (T)	$\leq 0.5 \text{ mm}$	0.3 - 0.5 mm

**Note :** Test results are indicative as per testing method specified in standard. Test results may vary as per substrate, site condition & testing machine etc. Actual field performance will depend on installation methods and site conditions.



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## APPLICATION INSTRUCTIONS



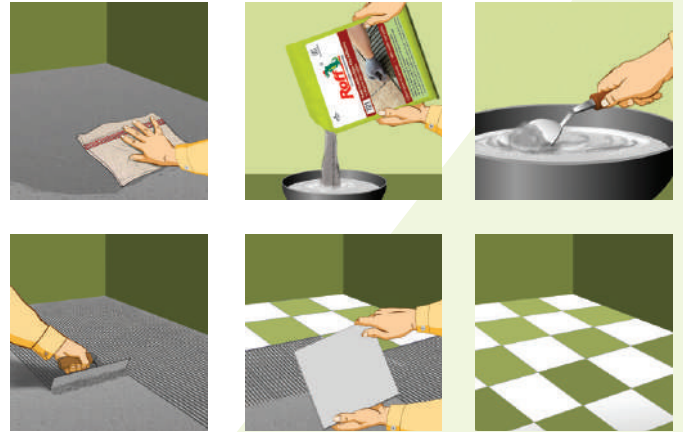
### SUBSTRATE PREPARATION

- The substrate must be level, cured, undamaged, compact, rigid, resistant, dry and free from any debonding agents and from damp rising.
- All surfaces must be plumb and true to within 6 mm in 10 ft (3m).
- Dry, dusty surfaces should be dampened with water & excess water should be swept off.
- New concrete slabs shall be damp cured and 28 days old before application which will reduce the shrinkage from tile fixing surface.
- Expansion joints to be provided & filled with suitable sealant.
- Do not cover expansion joints with thin set tile adhesive/ tile.

### MIXING

- Add 3 – 3.5 parts of powder to 1 part of water or 5 - 6 litre water for 20 Kg powder in a clean mixing vessel.
- Adjust the water as per desired consistency.
- Mix with a suitable mechanical stirrer or slow speed drills (50 - 100 rpm) until a lump free homogeneous paste is obtained.
- Always mix required quantity, which can be consumed within pot life.
- Leave mixture for 5 minutes before use.
- No further water should be added.

## APPLICATION



- Apply adhesive to the substrate with the flat side of the trowel.
- Comb on additional adhesive with the notched side.
- Use the proper sized notched trowel to ensure full bedding of the tile.
- Tiles must be fixed within 15-20 minutes of adhesive being applied, depending on the porosity of the surface and atmospheric conditions.
- Check the adhesive ribs periodically and if a skin has formed, remove the dried adhesive and apply fresh adhesive.
- Press the tiles firmly into position with a slight twisting action, checking periodically that good contact is maintained with the back of each tile and beat in using rubber mallet to imbed tile and adjust level.
- Leave no voids behind tiles.
- For large size tiles or irregular surfaces, adhesive can additionally be buttered on the backs of the tiles to ensure full adhesive contact.
- Use suitable support along with adhesive for fixing tiles on vertical surfaces.
- For highly absorbent natural stones which may form a wet patch when adhesive is used, it is recommended to use suitable Roff Impregnating sealer on all sides. Please refer Technical Data Sheets of product intended for use for specific instructions of use
- Leave adequate joints between individual wall and floor tiles using Roff spacers. The joint width shall be as per the recommendation of architect / engineer.
- Clean off surplus adhesive from the tile face and between joints.
- Clean tools and tile work with water while adhesive is fresh.



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## PRECAUTIONS & NOTE

- Always add powder to water.
- Do not add excess water than recommended.
- Never add sand & cement at site.
- Do not use on wet screed. Surface must be fully cured.
- Do not use the adhesive to correct surface irregularities greater than 15 mm.
- Protect from direct rainfall/ foot traffic for at least 24 hours.
- Leave gap between the tile & fill gaps with Roff tile grout.
- Designer/ applicator must evaluate the use of an additional mechanical fastening system for extra security for more than 3m height (such as steel hooks fastened to the substrate).

## COVERAGE

- Approx. 5 - 6 m<sup>2</sup>/ 20 kg Bag at 3 mm thickness (using 6 mm x 6 mm notch).
- Approx. 7.5 - 8 m<sup>2</sup>/ 30 kg Bag at 3 mm thickness (using 6 mm x 6 mm notch).
- Approx. 1.2 kg/ m<sup>2</sup> per mm of thickness.

\*Coverage will vary depending on trowel notch size, type, size of tile and substrate smoothness and evenness.

## PACKAGING

20 kg & 30 kg Bag

## SHELF LIFE

12 months for sealed pack when stored under cover, out of direct sunlight, dampproof condition and protect from extremes of temperature.

## GROUTING

Grouting should be carried out after 24 hours of tiling. Use the appropriate grouting material from Roff range of cementitious and epoxy grouts.

## SAFETY PRECAUTIONS

Keep out of reach of children. Wear suitable protective clothing, gloves and eyes/face protection. After contact with skin, wash immediately with plenty of clean water. In case of contact with eyes rinse immediately with plenty of clean water and seek medical advice. Limited to professional use only.

For more details please refer the relevant Material Safety Data Sheet, available on request.



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