

## Tile Adhesive - Ultra Strength

**ST-TA(US)**

Ultra high strength polymerized thin bed adhesive with efflorescence resistance complying with C2TE class of BS EN 12004 for both interior and exterior wall and floor tile fixing application.



### PRODUCT DESCRIPTION

ST-TA(US) is a proprietary cementitious high polymer premixed, water resistant and single component tile adhesive specially designed for fixing porous and vitreous tiles including granite, artificial granite tile, ceramic and homogeneous tiles. Product characteristics of ST-TA(US) fully complies with the requirement of BS EN 12004 Type C Class 2 (Improved cementitious adhesive C2 grade) with ultra high adhesion strength, reduced-slip and extended open time properties. ST-TA(US) has excellent effect in preventing efflorescence. Best result for combating efflorescence can be achieved by employing Score Tech's render/plaster and tile grout products in the entire system. ST-TA(US) therefore provides superior assurance to applicators with its excellent quality, durability and on-site performance.

### SUBSTRATE PREPARATION

The substrate must be sound, even, well-aligned, clean and free of loose particles, grease and any other unwanted contaminants which may affect the adhesion of ST-TA(US). Tile fixing can be commenced at least 7 days after rendering or plastering.

### FEATURES & BENEFITS

- ◆ Premixed in factory
- ◆ Ultra strong adhesion to substrate
- ◆ Suitable for both interior & exterior use
- ◆ Sustainable to seasonal cycles
- ◆ Extended open time for application
- ◆ Non-slip properties
- ◆ Thixotropic characteristics
- ◆ Extremely low shrinkage
- ◆ Non-toxic to human beings when contact with potable water
- ◆ Anti-efflorescence

### AREAS OF APPLICATION

- ◆ Suitable for fixing both wall and floor tiles at interior/exterior environments and water retaining structures, e.g. water tank, swimming pool, etc.
- ◆ Fixing large size (e.g. 300x300mm, 600x600mm, etc) ceramic tiles, homogeneous tiles, natural stone, granites, etc. Consult Score Tech staff for fixing tiles in larger size.
- ◆ When tiling on highly absorptive substrates such as gypsum board, cement board, dry wall panels, etc., it is recommended to prime the substrate surface with Score Tech Supreme Primer (ST-SP) before commencement.
- ◆ Able to fix tiles on cementitious based waterproofing materials such as Score Tech Waterproofing Series.

## MIXING & INSTALLATION

1. Moisten the substrate surface with clean water and allow surplus water to drain away before application of tile adhesive.
2. Mix the tile adhesive with mechanical mixer for 5-7 minutes until a lump-free homogeneous paste is achieved. Allow the mixed tile adhesive material to stand for 10 minutes and mix again gently for 30 seconds before use.
3. Apply the well mixed tile adhesive directly with a steel trowel onto the substrate with the required thickness over the area for tiling. The open time of the tile adhesive may vary at different weather conditions and absorptive substrate will also reduce the open time of tile adhesive.
4. Back-butter is required for the tiles with deep grooves, ridges or large size.
5. Place and press the tiles firmly into the adhesive bed by gently tapping on the tiles to ensure good contact. Regular check is recommended to make sure there is no void under the back of the tiles.
6. Remove any excess adhesive before the adhesive become dry. Tile grouting by using ST-TG can be commenced 24 hours after the tiles are fixed.

## CURING

Under normal circumstances, natural air curing for ST-TA(US) is proven to be adequate.

## PACKAGE

40 kg bag

## SHELF LIFE

ST-TA(US) has a shelf life of 12 months if well kept in dry condition on lifted floor.

## HEALTH & SAFETY

Wear NIOSH approved face mask or equivalent personal protective equipment when handling the material. ST-TA(US) contains cement which may cause an allergic effect or irritation to eyes and skin. When contact with eyes, flush immediately with large quantity of water.

## REFERENCE STANDARDS

- ◆ European Standard: BS EN 12004;
- ◆ British Standard: BS 5980
- ◆ Hong Kong Standard: HKHA FIN5.M1010; Product Certificate PCCS-TA
- ◆ American Standard: ANSI A118.4; ASTM D3960
- ◆ Chinese Standard: JC/T 547; JC/T 1024
- ◆ Water Regulation Advisory Scheme (WRAS)

## TECHNICAL DATA

Colour	Grey / White				
Initial Tensile Adhesion Strength	2.1 N/mm <sup>2</sup>				
Tensile Adhesion Strength after Water Immersion	1.1 N/mm <sup>2</sup>				
Tensile Adhesion Strength after Heat Ageing	1.9 N/mm <sup>2</sup>				
Tensile Adhesion Strength after Freeze-thaw Cycles	1.6 N/mm <sup>2</sup>				
Open Time: not less than 30 minutes	≥ 0.5 N/mm <sup>2</sup>				
Slip	≤ 0.2 mm				
Adjustment time	10 minutes				
Shear Adhesion Strength	17.7 kN				
VOC Content	1 g/kg				
Resistance to Efflorescence	No efflorescence after 21 cycles				
Water Demand	Grey ~ 11.6 ± 0.4L/40 kg bag White ~ 12 ± 0.4L/40 kg bag				
Pot Life	~ 2 hours				
Coverage	~ 1.2 kg/m <sup>2</sup> /mm				
Tile size	Recommended Notch Size (mm x mm)	Back Buttering Thickness (mm)	Thickness on Wall (mm)	Total Application thickness (mm)	Theoretical Consumption (Kg/m <sup>2</sup> )
100 x 100	6 x 6	/	2.5	2.5	3
300 x 300	6 x 6	2	3	5	6
600 x 600	10 x 10	2	4	6	7.2
900 x 900	10 x 10	2	4	6	7.2

## DISCLAIMER

Note: As the application condition may vary from site to site and may not be identical to the same condition under which the parameters in the brochure are drawn, the information provided on this Technical Data Sheet is for general guidance only. Warranty will not be given to the ultimate performance and application results of this material when the material is not kept, mixed, applied or cured strictly in accordance with the requirements and/or instructions listed out in this brochure or in other supplementary document.

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# Material Safety Data Sheet for Score Tech Tile Adhesive-Ultra Strength ST-TA(US)

## IDENTIFICATION:

Product Name:	:	Score Tech ST-TA(US)
Component:	:	One part
Chemical composition (wt.%)	:	Cement, Graded Sand, Polymer Additives
Dangerous Goods Class &	:	Not applicable
Subsidiary Risk:		
Explosive material:	:	ST-TA(US) does not contain explosive material and is therefore non-explosive.
Flammability:	:	ST-TA(US) does not contain flammable material and is therefore non-flammable.
Toxic material:	:	None
Carcinogenic substances	:	None

## STORAGE REQUIREMENT:

ST-TA(US) can sustain high temperature but should be stored under dry condition to avoid clogging or hardening.

## AREA AND METHOD OF USE:

- ◆ Tile fixing and grouting system
- ◆ Apply by trowel

## PHYSICAL DESCRIPTION:

Appearance	:	Powder form
Colour:	:	Grey/White
Odour:	:	ST-TA(US) has no odour
Alkalinity:	:	ST-TA(US) is slightly alkaline in its plastic stage and close to neutral after 14 days' age
Other Properties	:	Hardens due to hydration of cement takes place when contact with water

# Material Safety Data Sheet for Score Tech Tile Adhesive-Ultra Strength ST-TA(US)

## PRECAUTIONS FOR USE:

- ♦ Handle ST-TA(US) with care to avoid causing dust emission.
- ♦ Wet Score Tech ST-TA(US), particularly in plastic (unhardened) stage, can dry the skin and cause slightly alkali burns. Individuals with sensitive skin should avoid continuous contact with ST-TA(US) otherwise severe allergic dermatitis may be caused.
- ♦ Persons with a history of respiratory illness or reduced pulmonary function should avoid work places with high dust levels.
- ♦ Use of impervious gloves, boots and clothing to protect the skin from contact with dust and wet Score Tech ST-TA(US) is recommended. Barrier creams may also be used.
- ♦ Workers are recommended to wash their skins with soap and water after work.

## HEALTH HARZARD & FIRST AID INFORAMATION:

Hazard	Health Effects	First Aid Measure
Swallowed	Mild corrosive action	Wash mouth, drink large quantity of water and seek for medical attention immediately
Contact with Eyes	Exposure and thus irritation to eyes may cause inflammation of the cornea	Irrigate with copious water for at least 10 minutes and seek for medical attention immediately
Contact with Skin	Exposure to skin (especially in wet stage of the material) may cause caustic and dry out of skin	Wash with tepid soapy water. A shower may be required.

## Cleaning & Waste Disposal:

Remove any residual materials and dust on the application equipment and surroundings, use water for wiping and cleaning when necessary.

Score Tech ST-TA(US) can be treated as common construction waste for disposal.