Innovative high performance tile adhesive with water-prevention property for fixing all types of tiles in bathrooms and kitchens

webertai 2-in-1

- 2-in-1 property for tiling and preventing water
- Excellent bonding strength
- Good for laying large size tiles from 60x60 cm like granito tiles, granites and marbles
- Laying tiles on internal existing tiles in bathroom and kitchen
- Low VOCs

webertai 2-in-1 is an innovative tile adhesive with water prevention property to mix with water using to lay tiles in bathrooms, kitchens, and any areas in contact with water

- **SUITABLE FOR :** ceramic tiles, granito tiles, marbles, granites, artificial tiles size up to 1 x 1 m.
- **PACKAGING :** 5 kg and 20 kg bag
- **COLOR :** grey
- **COVERAGE :** average 1 m^2/5 kg bag
  average 4-7 m^2/20 kg bag
- **APPLICATION**

Substrate preparation

- New substrate should be sound, level, and clean with normal absorption rate
- Case of existing substrate; check bonding. Remove peel-off paint and de-bonded tiles and lay the new ones. Clean off any excess dirt and laitance.
- In case of porous substrate with high absorption, dampen the surface before tiling
- For new render or screed, it should be fully cured at the rate of 7 days per 1 cm thickness before tiling

Mixing

Mixing **webertai 2-in-1** in water with the ratio of 1 : 3 by volume (1 part of water + 3 parts of **webertai 2-in-1**). Using slow-speed electric mixer to mix or gradually mix by hand until obtaining homogeneous lump-free paste. Leave for 3 – 4 minutes for chemical curing before using.

Tiling

1. Using notched trowel to spread tile adhesive onto substrate
2. Back buttering in case of laying tile bigger than 10 x 10 inches
3. Placing tiles on tile adhesive and knock gradually with rubber hammer
4. Clean the excess tile adhesive on tile surface
5. Tiles can be adjusted within 15 minutes after laying
6. Leave for 24 hours before grouting

- **SHELF LIFE AND STORAGE**
  One year after manufacturing date when stored unopened in dry and ventilated place. Store airtight in dry and ventilated conditions if remained in opened bag

TECHNICAL DATA

Type	High performance tile adhesive
Density of powder	1.35 g/cm^3
Chemical curing time	3 – 4 minutes
Pot life (in shade)	4 hours
Open time	20 - 30 minutes
Adjusting time	15 minutes
Recommended thickness	2 – 10 mm
Waiting time before grouting	24 hours

Remark: These test results are from laboratory test. They could be slightly different from on-site results because of the differences in applications and conditions

CERTIFED STANDARD

International/European standard	Standard	Result
Initial tensile adhesion strength ISO 13007 part 2-4.4.4.2 or EN 1348-8.2	≥ 1.0 N/mm^2	1.70 N/mm^2
Tensile adhesion strength after water immersion ISO 13007 part 2-4.4.4.3 or EN 1348-8.3	≥ 1.0 N/mm^2	1.10 N/mm^2
American Standard	**Standard**	**Result**
Shear strength to glazed wall tiles at 28 days according to ANSI 118.4 – 1999: F – 5.1.5	≥ 20.9 kg/cm^2	22.1 kg/cm^2
Shear strength to impervious ceramic mosaic tiles at 28 days according to ANSI 118.4 – 1999: F – 5.2.4	≥ 14.0 kg/cm^2	35.8 kg/cm^2
Shear strength to quarry tiles at 28 days according to ANSI 118.4 – 1999: F – 5.3.3	≥ 10.5 kg/cm^2	17.5 kg/cm^2

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EXECTUTIVE SUMMARY

The Structural Engineering Laboratory, School of Engineering and Technology, Asian Institute of Technology (AIT) was engaged by the Saint - Gobain Weber Co.,Ltd., to conduct the performance test of cementitlious tile adhesive. The sample in the trademark of " weber.tai fix " was submitted by the Saint - Gobain Weber Co.,Ltd. The series of test were detailed in according with ISO 13007 / European Norms (EN 12004:2005) test methods as follows:

Specification of cementitious adhesives

Fundamental Characteristics			
1a Normal setting adhesives			
Characteristic	Requirement	Test Method	Results
Tensile adhesion strength	≥ 0.5 N/mm^2	ISO 13007 part 2 4.4.4.2 or EN 1348 § 8.2	PASS
Tensile adhesion strength after water immersion	≥ 0.5 N/mm^2	ISO 13007 part 2 4.4.4.3 or EN 1348 § 8.3	PASS
Open time : tensile adhesion strength	≥ 0.5 N/mm^2 after not less than 20 min	ISO 13007 part 2 4.1 or EN 1346	PASS

Regarding the testing, it was found that the properties of weber.tai fix are conformed to ISO 13007 / European Norms (EN 12004:2005) test methods as specified. These results certify the adequacy and representative character of test samples only.

Reference No: S0161-13

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Checked by:

MR. EKKACHAI YOOPRASERTCHAI
RESEARCH ASSOCIATE

Approved by:

ASIAN INSTITUTE OF TECHNOLOGY ★ AIT ★ STRUCTURAL ENGINEERING

DR. PENNUNG WARNITCHAI
LEADER OF CIVIL AND INFRASTRUCTURE ENGINEERING THEMATIC (CIE)
April 3, 2013

FACULTY OF ENGINEERING

CHULALONGKORN UNIVERSITY

Type of test : 4-week shear strength of mortar to glazed wall tiles (ANSI 118.4 - 1999 : F-5.1.5)

Test specimen : Four (4) shear specimens of glazed wall tiles (type A-1) (108 x 54 mm) were prepared in the laboratory.

The mix proportion of water to "weber.tai 2in1" ratio was 25% by weight.

Client : SAINT-GOBAIN WEBER CO., LTD.

Date of test : March 23, 2012

Test method : After mixing the product mortar thoroughly, the mortar is applied to two pieces of tiles to form a bonded specimen.

The specimens are left still for 24 hours, then cured in standard condition for 27 days until conducting the test.

Test results : The shear strength of specimens at the age of 28 days are shown as follows.

(The test results are good only for those specimens tested.)

Specimen No.	Size of Tile Specimen (mm x mm)	Assumed Area of Bond (sq.cm)	Maximum Load (kgf)	Shear Strength (ksc)	Remarks
1	108 x 54	51.6	1,245	24.1	Requirement: 4-week shear strength greater than 20.9 kg/cm^2
2	108 x 54	51.6	1,182	22.9	
3	108 x 54	51.6	1,109	21.5	
4	108 x 54	51.6	1,019	19.7	
			Average	22.1	

Note: This resutls certify the adequacy and representative character of the test samples only.

Date : October 12, 2012

Akhrawat Lenwari

(Assoc. Prof. Dr. Akhrawat Lenwari)

On Behalf of Head of Civil Engineering Department

Tested by :

(Assist. Prof. Dr. Boonchai Sangpetngam)

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Type of test : 4-week shear strength of mortar to impervious ceramic mosaic tiles (ANSI 118.4 - 1999 : F-5.2.4)

Test specimen : Four (4) shear specimens of modular unglazed ceramic mosaic tiles (type C) (50 x 50 x 6 mm) were prepared in the laboratory.

The mix proportion of water to "weber.tai 2in1" ratio was 25% by weight.

Client : SAINT-GOBAIN WEBER CO., LTD.

Date of test : March 23, 2012

Test method : After mixing the product mortar thoroughly, the mortar is applied to two pieces of tiles to form a bonded specimen.

The specimens are left still for 24 hours, then cured in standard condition for 27 days until conducting the test.

Test results : The shear strength of specimens at the age of 28 days are shown as follows.

(The test results are good only for those specimens tested.)

Specimen No.	Size of Tile Specimen (mm x mm)	Assumed Area of Bond (sq.cm)	Maximum Load (kgf)	Shear Strength (ksc)	Remarks
1	50 x 50	18.7	784	41.9	Requirement: 4-week shear strength greater than 14.0 kg/cm^2
2	50 x 50	18.7	689	36.8	
3	50 x 50	18.7	607	32.5	
4	50 x 50	18.7	598	32.0	
			Average	35.8	

Note: This resutls certify the adequacy and representative character of the test samples only.

Date : October 12, 2012

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Type of test : 4-week shear strength of mortar to quarry tiles (ANSI 118.4 - 1999 : F-5.3.3)

Test specimen : Four (4) shear specimens of unglazed quarry tiles (type D) (102 x 208 x 13 mm) were prepared in the laboratory.

The mix proportion of water to "weber.tai 2in1" ratio was 25% by weight.

Client : SAINT-GOBAIN WEBER CO., LTD.

Date of test : March 23, 2012

Test method : After mixing the product mortar thoroughly, the mortar is applied to two pieces of tiles to form a bonded specimen.

The specimens are left still for 24 hours, then cured in standard condition for 27 days until conducting the test.

Test results : The shear strength of specimens at the age of 28 days are shown as follows.

(The test results are good only for those specimens tested.)

Specimen No.	Size of Tile Specimen (mm x mm)	Assumed Area of Bond (sq.cm)	Maximum Load (kgf)	Shear Strength (ksc)	Remarks
1	102 x 208	93.0	1,955	21.0	Requirement: 4-week shear strength greater than 10.5 kg/cm^2
2	102 x 208	93.0	1,778	19.1	
3	102 x 208	93.0	1,412	15.2	
4	102 x 208	93.0	1,344	14.5	
			Average	17.5	

Note: This resutls certify the adequacy and representative character of the test samples only.

Date : October 12, 2012

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TEST RESULT SUMMARY

The sample in the trademark of "weber.tai 2-in-1" was submitted by the Saint-Gobain weber Co.,Ltd. The series of test and test methods were conducted on October 1, 2010 in accordance with ISO 13007 / European Norms (EN 1348:1997) with details as follows:

Specification of cementitious adhesives (C)

Fundamental Characteristics			
1a Normal setting adhesives (C2)			
Characteristics	Requirement	Test Method	Results
Tensile initial adhesion strength	≥ 1 N/mm^2	EN 1348§ 8.2	PASS
Tensile adhesion strength after water immersion	≥ 1 N/mm^2	EN 1348 § 8.3	PASS

Regarrding to the testing results, it was found that the properties of "weber.tai 2-in-1" are conformed to ISO 13007/ European Norms (EN 1348:1997) test methods as specified. These results certify the adequacy and representative character of test samples only.

(Assist. Prof. Dr. Chatpan Chintanapakdee)

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Type of test : INITIAL ADHESION STRENGTH (EN 1348:1997)

Test specimen : Five (5) specimens of "weber.tai 2-in-1" were prepared in the laboratory.

The mix proportion of water to "weber.tai 2-in-1" ratio was 25% by weight.

Client : SAINT-GOBAIN WEBER CO., LTD.

Date of test : October 1, 2010

Test method : After finish the preparation, the test units were placed in standard conditions for 27 days.

Bond the pull head plate to the tile with the high strength epoxy and keep the test units for a further 24 hour in standard condition. Determine the tensile adhesive strength.

Test results :

(The test results are good only for those specimens tested.)

Specimen No.	Width of Specimen (mm)	Length of Specimen (mm)	Area (mm^2)	Maximum Load (N)	Tensile Adhesion Strength (N/mm^2)	Remarks
1	50	50	2,500	4,663	1.9	The failure of all specimens
2	50	50	2,500	3,981	1.6	occurred at the interface between
3	50	50	2,500	3,819	1.5	tile adhesive surface and concrete
4	50	50	2,500	4,168	1.7	slab surface
5	50	50	2,500	4,416	1.8	
				Average	1.7	

Note: This resutls certify the adequacy and representative character of the test samples only.

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Type of test : ADHESIVE STRENGTH AFTER WATER IMMERSION (EN 1348:1997)

Test specimen : Five (5) specimens of "weber.tai 2-in-1" were prepared in the laboratory.
The mix proportion of water to "weber.tai 2-in-1" ratio was 25% by weight.

Client : SAINT-GOBAIN WEBER CO., LTD.

Date of test : October 1, 2010

Test method : After finish the preparation, the test unite were placed in standard conditions for 7 days and stored in water for 20 days. Bond the pull head plate to the tile with the high strength epoxy and keep the test units for a further 24 hour in water at the standard temperature. Determine the tensile adhesive strength.

Test results :

(The test results are good only for those specimens tested.)

Specimen No.	Width of Specimen (mm)	Length of Specimen (mm)	Area (mm^2)	Miximum Load (N)	Tensile Adhesion Strength (N/mm^2)	Remarks
1	50	50	2,500	2,184	0.9	The failure of all specimens
2	50	50	2,500	2,605	1.0	occurred at the interface between
3	50	50	2,500	2,952	1.2	tile adhesive surface and concrete
4	50	50	2,500	2,978	1.2	slab surface
5	50	50	2,500	3,026	1.2	
				Average	1.1	

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