



Standard tile adhesive for laying ceramic tiles, granite size up to 60 x 60 cm



webertai cem



Laying ceramic tiles, grando tiles up to size 60x60 cm on both floor and wall



Suitable for medium size project where general tiles are laid



Extended open time resulting in faster application



Low VOCs

webertai cem is cementitious pre-mixed tile adhesive to mix with water giving good bonding for laying tiles on both floor and wall

- **SUITABLE FOR :** ceramic tiles, clay tiles, grando tiles size up to 60 x 60 cm
- **PACKAGING :** 20 kg bag and 25 kg bag
- **COLOR :** grey
- **COVERAGE :** average 4 m²/20 kg bag
average 5 m²/25 kg bag
- **APPLICATION**

Substrate preparation

- Substrate should be sound, level, and clean with normal absorption rate
- 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 cem** in water with the ratio of 1 : 3 by volume (1 part of water + 3 parts of **webertai cem**). 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 10 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	Standard tile adhesive
Density of powder	14 g/cm ³
Chemical curing time	3 – 4 minutes
Pot life (in shade)	4 hours
Open time	20 minutes
Adjusting time	10 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

CERTIFIED STANDARD

International/European standard	Standard	Result	
Initial tensile adhesion strength ISO 13007 part 2-4.4.4.2 or EN 1348-8.2	≥ 0.5 N/mm ²	1.03 N/mm ²	
Tensile adhesion strength after water immersion ISO 13007 part 2-4.4.4.3 or EN 1348-8.3	≥ 0.5 N/mm ²	1.09 N/mm ²	
Open time tensile adhesion strength ISO 13007 part 2-4.1 or EN 1346	≥ 0.5 N/mm ²	0.74 N/mm ²	
American Standard	Standard	Result	
Shear strength according to ANSI A 118.1 – 2012			
- To glazed wall tiles	7 days	> 1.38 MPa	2.17 MPa
- To porcelain mosaics	1 day	> 0.34 MPa	1.26 MPa
	7 days	> 1.03 MPa	2.44 MPa
	28 days	> 1.03 MPa	2.87 MPa
	84 days	> 1.03 MPa	3.09 MPa
Water immersion shear strength according to ANSI A 118.1 – 2012			
- To glaze wall tiles	7 days	> 1.03 MPa	4.03 MPa
- To porcelain mosaic	7 days	> 0.69 MPa	2.54 MPa



AIT

Asian Institute of Technology

School of Engineering and Technology

Postal Address:
P.O. Box 4, Klong Luang
Pathumthani 12120
Thailand

Street Address:
Km. 42 Paholyothin Highway
Klong Luang, Pathumthani 12120
Thailand

Tel: (66-2) 524-6051-57
Fax: (66-2) 524-5509, 6059
<http://www.ait.ac.th>

EXECUTIVE 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 cementitious tile adhesive. The sample in the trademark of " weber.tai cem " was submitted by the Saint - Gobain Weber Co.,Ltd. The series of test were detailed in according with ISO 13007 / European Norms (EN 12004:2007+A1:2012) test methods as follows:

Specification of cementitious adhesives

Fundamental Characteristics			
1a Normal setting adhesives			
Characteristic	Requirement	Test Method	Results
Tensile adhesion strength	$\geq 0.5 \text{ N/mm}^2$	ISO 13007 part 2 4.4.4.2 or EN 1348 § 8.2	PASS
Tensile adhesion strength after water immersion	$\geq 0.5 \text{ N/mm}^2$	ISO 13007 part 2 4.4.4.3 or EN 1348 § 8.3	PASS
Open time : tensile adhesion strength	$\geq 0.5 \text{ N/mm}^2$ 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 cem are conformed to ISO 13007 / European Norms (EN 12004:2007+A1:2012) test methods as specified. These results certify the adequacy and representative character of test samples only.

Reference No: S0161-13

Date of Issue: 3 April 2013

Checked by:

MR. EKKACHAI YOOPRASERTCHAI
RESEARCH ASSOCIATE

Approved by:

DR. PENNUNG WARNITICHAI
LEADER OF CIVIL AND INFRASTRUCTURE
ENGINEERING GROUP
May 17, 2013



Asian Institute of Technology

Km. 42 Paholyothin Highway, Klong Luang, Pathumthani, Thailand 12120

P. O. Box 4 Klong Luang, Pathumthani 12120, Thailand. Tel. (66-2) 524-5527, 524-6427 Fax. (66-2) 524-5544

STRUCTURAL ENGINEERING LABORATORY

STRUCTURAL ENGINEERING FIELD OF STUDY

SCHOOL OF ENGINEERING AND TECHNOLOGY

TYPE OF TEST: INITIAL ADHESION STRENGTH (EN 1348:2007)

TEST SPECIMEN: Ten (10) specimens of Ceramic tile of size 50 x 50 x 5 mm. installed by using " weber.tai cem " were prepared in the SE laboratory. The mix proportion of water to " weber.tai cem " ratio was 25.0 % by weight.

CLIENT: SAINT - GOBAIN WEBER CO., LTD.

DATE OF TEST: February 22, 2013

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:

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	3,383	1.35	Adhesive failure between tile and adhesive
2	50	50	2,500	1,961	0.78	Cohesive failure within the adhesive
3	50	50	2,500	2,030	0.81	Adhesive failure between tile and adhesive
4	50	50	2,500	1,638	0.66	Cohesive failure within the adhesive
5	50	50	2,500	3,011	1.20	Cohesive failure within the adhesive
6	50	50	2,500	2,972	1.19	Cohesive failure within the adhesive
7	50	50	2,500	3,060	1.22	Cohesive failure within the adhesive
8	50	50	2,500	1,716	0.69	Cohesive failure within the adhesive
9	50	50	2,500	2,648	1.06	Cohesive failure within the adhesive
10	50	50	2,500	3,236	1.29	Cohesive failure within the adhesive
				Average	1.03	

Note: This report certifies the adequacy and representative character of the test sample(s) only.



TESTED BY:


MR. APIRAK POORAT
 TECHNICIAN

CHECKED BY:


MR. EKKACHAI YOOPRASERTCHAI
 RESEARCH ASSOCIATE

APPROVED BY:



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

AIT

Doc. No. S0161J-13

Asian Institute of Technology

Km. 42 Paholyothin Highway, Klong Luang, Pathumthani, Thailand 12120

P. O. Box 4 Klong Luang, Pathumthani 12120, Thailand. Tel. (66-2) 524-5527, 524-6427 Fax. (66-2) 524-5544

STRUCTURAL ENGINEERING LABORATORY

STRUCTURAL ENGINEERING FIELD OF STUDY

SCHOOL OF ENGINEERING AND TECHNOLOGY

TYPE OF TEST: ADHESIVE STRENGTH AFTER WATER IMMERSION (EN1348:2007)**TEST SPECIMEN:** Ten (10) specimens of Ceramic tile of size 50 x 50 x 5 mm. installed by using " weber.tai cem " were prepared in the SE laboratory. The mix proportion of water to " weber.tai cem " ratio was 25.0 % by weight.**CLIENT:** SAINT - GOBAIN WEBER CO., LTD.**DATE OF TEST:** February 22, 2013**TEST METHOD:** After finish the preparation, the test units 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 in water at the standard temperature. Determine the tensile adhesive strength.**TEST RESULTS:**

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	3,138	1.26	Cohesive failure within the adhesive
2	50	50	2,500	2,893	1.16	Cohesive failure within the adhesive
3	50	50	2,500	2,668	1.07	Cohesive failure within the adhesive
4	50	50	2,500	3,629	1.45	Cohesive failure within the adhesive
5	50	50	2,500	1,657	0.66	Adhesive failure between tile and adhesive
6	50	50	2,500	1,716	0.69	Adhesive failure between tile and adhesive
7	50	50	2,500	1,981	0.79	Cohesive failure within the adhesive
8	50	50	2,500	3,619	1.45	Cohesive failure within the adhesive
9	50	50	2,500	3,060	1.22	Cohesive failure within the adhesive
10	50	50	2,500	3,011	1.20	Cohesive failure within the adhesive
				Average	1.09	

Note: This report certifies the adequacy and representative character of the test sample(s) only.

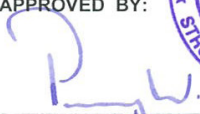
TESTED BY:


MR. APIRAK POORAT
TECHNICIAN

CHECKED BY:


MR. EKKACHAI YOOPRASERTCHAI
RESEARCH ASSOCIATE

APPROVED BY:


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

STRUCTURAL ENGINEERING LABORATORY**STRUCTURAL ENGINEERING FIELD OF STUDY****SCHOOL OF ENGINEERING AND TECHNOLOGY****TYPE OF TEST:** OPEN TIME (EN1346)**TEST SPECIMEN:** Thirty (30) specimens of Ceramic tile of size 50 x 50 x 5 mm. installed by using " weber.tai cem " were prepared in the SE laboratory. The mix proportion of water to " weber.tai cem " ratio was 25.0 % by weight.**CLIENT:** SAINT - GOBAIN WEBER CO., LTD.**DATE OF TEST:** February 22, 2013**TEST METHOD:** Apply a thin layer of the adhesive to the concrete slab with a straight edge trowel. After 5, 10 and 20 minutes place the tiles on the adhesive and storage them under standard conditions for 27 days. Bond the pull head plates to the tiles 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:**

Specimen No.	Tensile adhesion strength of specimen in different open time (N/mm ²)		
	5 (min.)	10 (min.)	20 (min.)
1	1.45	0.94	0.60
2	1.40	0.82	1.00
3	1.47	0.62	1.05
4	1.42	0.59	0.78
5	1.61	0.82	0.77
6	1.66	0.76	0.69
7	1.56	1.08	0.56
8	1.20	0.73	0.55
9	1.35	0.79	0.75
10	1.65	1.05	0.68
Average	1.48	0.82	0.74

Note: This report certifies the adequacy and representative character of the test sample(s) only.


TESTED BY:


MR. APIRAK POORAT
TECHNICIAN

CHECKED BY:


MR. EKKACHAI YOOPRASERTCHAI
RESEARCH ASSOCIATE

APPROVED BY:


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



CENTRO TECNOLÓGICO DA CERÂMICA E DO VIDRO

Parque - Parque Tecnológico de Coimbra - Lotes 6 e 7
3040-540 ANTANHOL | Portugal

Rua Coronel Veiga Simão - Loreto (sede)
3025-307 COIMBRA | Portugal

contr. PT 501 632 174

T +351 239499200
centro@ctcv.pt
www.ctcv.pt

**Tests of dry-set cement mortar
according ANSI A118.1:2012 - weber
tai.cem**

Working report Nº 315.37004-01/18

Client: **Saint-Gobain Weber Co., Ltd - Thailand**

Contact at client: **Kanchana LOCOLAS**

Contact at CTCV: **J. Valente de Almeida**

Work period: **January - May 2018**

Proj. nº 315.37004

Rep. nº 01

Revision:

Date: June 2018

<http://www.ctcv.pt>



CENTRO TECNOLÓGICO DA CERÂMICA E DO VIDRO

Parque - Parque Tecnológico de Coimbra - Lotes 6 e 7
3040-540 ANTANHOL | Portugal
Rua Coronel Veiga Simão - Loreto (sede)
3025-307 COIMBRA | Portugal

contr. PT 501 632.174
T +351 239499200
centro@ctcv.pt
www.ctcv.pt

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Proj. nº 315.37004

Rep. nº 01

Revision: 0

Date: June 2018

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CENTRO TECNOLÓGICO DA CERÂMICA E DO VIDRO
iParque - Parque Tecnológico de Coimbra - Lotes 6 e 7 | contr. PT 501 632.174
3040-540 ANTANHOL | Portugal | T +351 239499200
Rua Coronel Veiga Simão - Loreto (sede) | centro@ctcv.pt
3025-307 COIMBRA | Portugal | www.ctcv.pt

Tests of dry-set cement mortar according ANSI A118.1:2012 - weber tai.cem

Saint Gobain Weber Co Ltd - Thailand

Aim

Evaluate compliance of the test results with the requirements of ANSI A118.1: 2012¹.

1. Introduction

Saint Gobain Weber Co Ltd - Thailand requested the CTCV to carry out tests on dry-set cement mortar - weber tai.cem - in accordance with the American Standard ANSI A118.1.

This report presents the methodology of the tests, the results of the tests carried out and their comparison with the applicable regulatory requirements

2. Methodology

The methodology used in the study was the following:

- carrying out the tests
- processing of data
- reporting

2.1. Tests

The tests carried out are presented at table 1.

¹ ANSI A118.1:2012 - American National Standard Specifications for Dry-Set Cement Mortar.



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iParque - Parque Tecnológico de Coimbra - Lotes 6 e 7 | contr. PT 501 632 174
3040-540 ANTANHOL | Portugal | T +351 239499200
Rua Coronel Veiga Simão - Loreto (sede) | centro@ctcv.pt
3025-307 COIMBRA | Portugal | www.ctcv.pt

Table 1 - Tests according ANSI A118.1

Property	Test duration and/or conditions
Glazed wall tile shear strength (A1)	7 days 7 days water immersion
Porcelain mosaic tile shear strength (C)	1 day 7 days 7 days water immersion 28 days 12 weeks

2.2. Test results

The test results are presented at table 2.

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Parque - Parque Tecnológico de Coimbra - Lotes 6 e 7
 3040-540 ANTANHOL | Portugal
 Rua Coronel Veiga Simão - Loreto (sede)
 3025-307 COIMBRA | Portugal

contr. PT 501 632 174
 T +351 239499200
 centro@ctcv.pt
 www.ctcv.pt

Table 2 - Test results

Ceramic	Test duration/condition	Specimen	Force (kN)	Tension (MPa)	Average (MPa)
A1	Shear initial, 7d	1	10,08	1,95	2,17
		2	11,13	2,16	
		3	11,45	2,22	
		4	12,12	2,35	
	Shear, after 7 d water immersion	1	20,23	3,92	4,03
		2	21,34	4,14	
		3	21,39	4,15	
		4	20,21	3,92	
C	Shear initial, 1d	1	2,15	1,15	1,26
		2	2,08	1,11	
		3	2,43	1,30	
		4	2,78	1,49	
	Shear initial, 7d	1	5,25	2,81	2,44
		2	4,63	2,48	
		3	3,90	2,09	
		4	4,47	2,39	
	Shear initial, 28d	1	5,81	3,11	2,87
		2	5,41	2,89	
		3	6,03	3,22	
		4	4,19	2,24	
	Shear initial, 12 weeks	1	6,13	3,28	3,09
		2	6,03	3,22	
		3	5,41	2,89	
		4	5,54	2,96	
	Shear, after 7 day water immersion	1	5,31	2,84	2,54
		2	3,94	2,11	
		3	4,71	2,52	
		4	5,07	2,71	

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CENTRO TECNOLÓGICO DA CERÂMICA E DO VIDRO

Parque - Parque Tecnológico de Coimbra - Lotes 6 e 7
3040-540 ANTANHOL | Portugal
Rua Coronel Veiga Simão - Loreto (sede)
3025-307 COIMBRA | Portugal

contr. PT 501 632 174
T +351 239499200
centro@ctcv.pt
www.ctcv.pt

3. Comparison with standard requirements

The comparison of test results with standard requirements is presented at Table 3.

Table 3 - Comparison of test results with standard requirements

Ceramic	Test duration/condition	Test result (MPa)	Requirements (MPa)	Compliance
A1	Shear initial, 7d	2,17	>1,38	Complies
	Shear, after 7 d water immersion	4,03	>1,03	Complies
C	Shear initial, 1d	1,26	>0,34	Complies
	Shear initial, 7d	2,44	>1,03	Complies
	Shear initial, 28d	2,87	>1,03	Complies
	Shear initial, 12 weeks	3,09	>1,03	Complies
	Shear, after 7 day water immersion	2,54	>0,69	Complies

Os resultados apresentados neste trabalho referem-se apenas às amostras ensaiadas. Não se assume qualquer responsabilidade relativa à exatidão da amostragem, a menos que seja efetuada sob a direta responsabilidade do CTCV. A reprodução deste trabalho é autorizada apenas na sua forma íntegra. Para qualquer reprodução parcial será indispensável autorização do CTCV por escrito.

Coimbra, 04 June 2018

Joaquim Valente de Almeida
Testing Materials Laboratory