



Industrial Research Services

Materials Science & Engineering, 37 Graham Road (PO Box 56), Highett, Victoria 3190, Australia
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Registered Testing Authority - CSIRO

2 November, 2012

Our Ref. EN13/ 2178

TEST REPORT No: 6452.2

Requested by: Soudis Australia
Unit 17, 14 Stanton Road
Seven Hills, NSW 2147
Scott Robinson
National Sales Manager

on (date): 26 September 2012

Test Site: CSIRO, Highett laboratories

Product Desc: Soudal SMX30P timber flooring adhesive, Batch: 1029997 001149

Sampling details: Produced by Soudal

Where: Not stated

Date: 26 September 2012

By Whom: Khanh Ho
How (methods): Delivered to Highett

The results reported relate only to the sample(s) tested.
No responsibility is taken for the accuracy of the sampling unless it is done under our own supervision.

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This test report consists of 6 pages.

These samples have been assessed to AS 4992.2-2006 Ceramic tiles – Grouts & adhesives.
The Standard is based on ISO 13007-1:2004.

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ADHESIVE MANUFACTURER: Soudal

SUMMARY OF RESULTS

AS 4992:2006 Ceramic tiles – Grouts and adhesives
Part 1 Terms, definitions and specifications for adhesives
Part 2 Test methods for adhesives (ISO 13007-2:2005, MOD)

Tensile adhesion strength

System, Concrete base, Soudal SMX30P timber flooring adhesive, Batch: 1029997 001149 with Merbau Hardwood and Tasmanian Oak.

Normal Setting Adhesives C1

Assessment Description:	Requirement	Result	
Tensile adhesion strength for Merbau Hardwood	$\geq 0.5 \text{ N/mm}^2$	1.08 N/mm²	PASS
Tensile adhesion strength for Tasmanian Oak	$\geq 0.5 \text{ N/mm}^2$	1.16 N/mm²	PASS

The tiling system; Soudal SMX30P timber flooring adhesive, Batch: 1029997 001149, Merbau Hardwood and Tasmanian Oak with concrete base sample material had a mean pull off strength of 1.08 N/mm² and 1.16 N/mm² respectively. The Merbau Hardwood and Tasmanian Oak were inserted base to adhesive to simulate the installation.

The system, Soudal SMX30P timber flooring adhesive, Batch: 1029997 001149, Merbau Hardwood and Tasmanian Oak with concrete base, does meet the minimum requirements for tensile strength after 28 days dry test. The system deemed to meet the minimum requirements for tensile strength for dry adhesion.

C1 tests not performed for the following below:

- Tensile adhesion strength after heat aging
- Adhesion strength after freeze-thaw cycle
- Open time: tensile adhesion strength

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Determination of tensile adhesion strength.

Test carried out in accordance with the method
 AS 4992.2-2006 Ceramic tiles – Grouts & adhesives

Test Date: 24 October 2012

Laboratory: CSIRO, Highett
Substrate: Concrete
Test Conditions: 23°C and 55% RH
 In accordance with ISO 13007-2: - 4.4.4.3

28 Days Dry with Merbau Hardwood

Sample No.	Total Load Newton Force (kN)	Tensile Strength (MPa)	Tensile Strength (MPa) within 20% mean	Failure Mode
1	2.68	1.07	1.07	100% AF-S
2	3.15	1.26	1.26	70% AF-S & 30% AF-T
3	3.28	1.31		70% AF-S & 30% AF-T
4	2.35	0.94	0.94	50% AF-S & 50% AF-T
5	2.53	1.01	1.01	100% AF-S
6	3.05	1.22	1.22	100% AF-S
7	3.15	1.26	1.26	100% AF-S
8	2.27	0.91	0.91	100% AF-S
9	2.32	0.93	0.93	100% AF-S
10	2.12	0.85		100% AF-S
Mean	2.69	1.08	1.08	

Failure Code: Adhesion Failure (AF-S or AF-T), Cohesive failure within the adhesive (CF-A), Cohesive failure in the substrate or in the tile (CF-S or CF-T). See Failure mode informative annex.

Requirements: Normal setting adhesives (C1): => 0.50 N/mm² Obligatory

Determination of Adhesion: **28 days dry** **1.08 N/mm²** **PASS**

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Determination of tensile adhesion strength.

Test carried out in accordance with the method
 AS 4992.2-2006 Ceramic tiles – Grouts & adhesives

Test Date: 24 October 2012

Laboratory: CSIRO, Highett
Substrate: Concrete
Test Conditions: 23°C and 55% RH
 In accordance with ISO 13007-2: - 4.4.4.3

28 Days Dry with Tasmanian Oak

Sample No.	Total Load Newton Force (kN)	Tensile Strength (MPa)	Tensile Strength (MPa) within 20% mean	Failure Mode
1	2.84	1.14	1.14	95% AF-S & 5% CF-T
2	3.02	1.21	1.21	100% AF-S
3	2.92	1.17	1.17	60% AF-S & 40% CF-T
4	3.10	1.24	1.24	90% AF-S & 10% AF-T
5	2.94	1.18	1.18	95% AF-S & 5% CF-T
6	2.58	1.03	1.03	95% AF-S & 5% CF-T
7	2.22	0.89		100% AF-S
8	2.32	0.93	0.93	98% AF-S & 2% CF-T
9	3.12	1.25	1.25	100% AF-S
10	3.33	1.33	1.33	95% AF-S & 5% CF-T
Mean	2.84	1.14	1.16	

Failure Code: Adhesion Failure (AF-S or AF-T), Cohesive failure within the adhesive (CF-A), Cohesive failure in the substrate or in the tile (CF-S or CF-T). See Failure mode informative annex.

Requirements: Normal setting adhesives (C1): => 0.50 N/mm² Obligatory

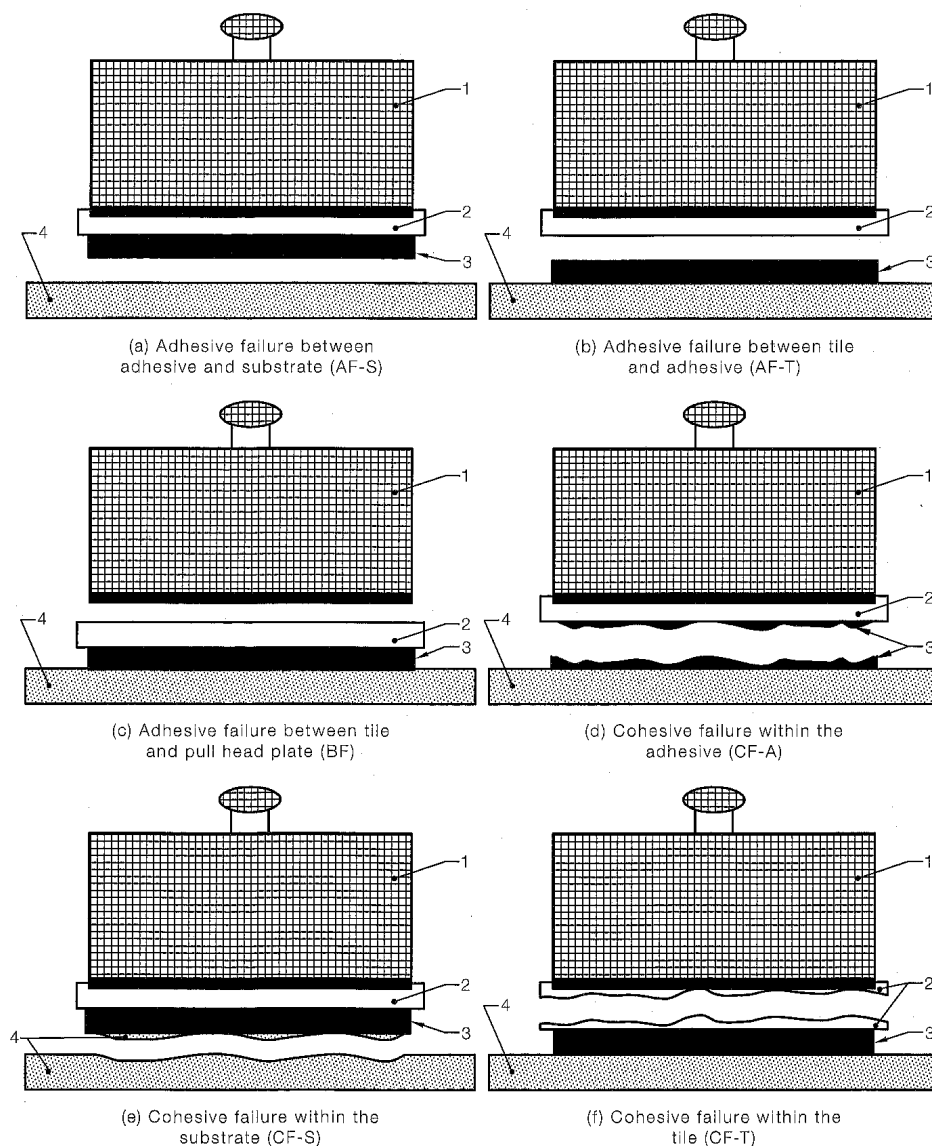
Determination of Adhesion: **28 days dry** **1.16 N/mm²** **PASS**

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Informative annex from AS 4992:2006:

FAILURE MODES

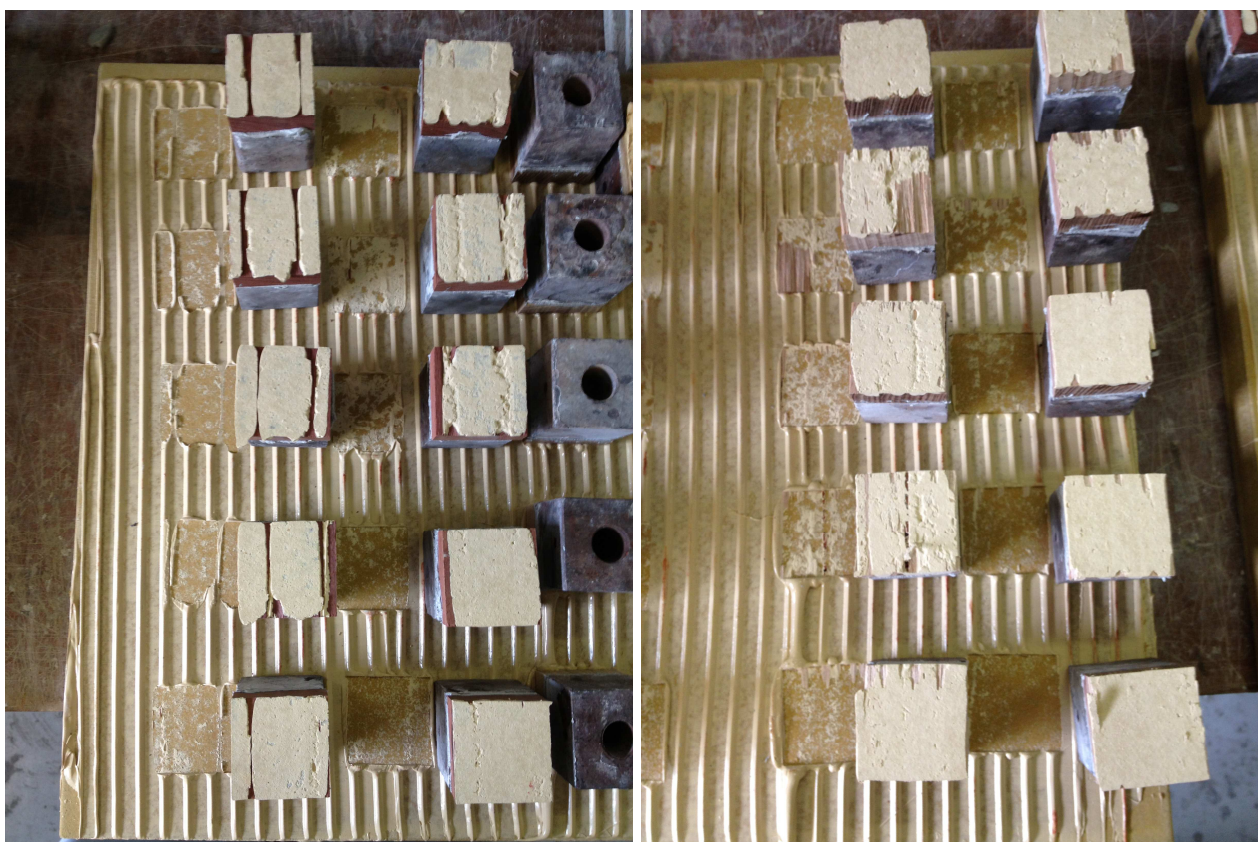


KEY:
 1 pull head plate
 2 test tile
 3 adhesive
 4 substrate (concrete slab)

Figure 3—Failure pattern

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Tensile strength test:





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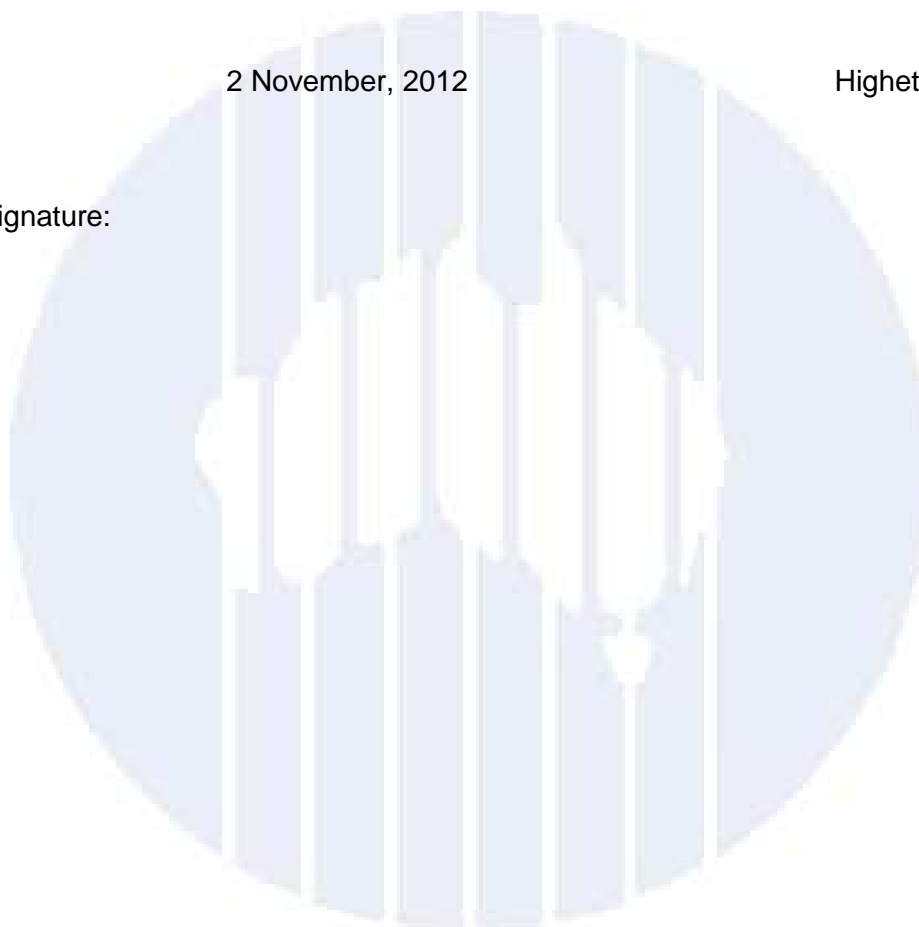
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Date and Place

2 November, 2012

Highett, Victoria

Name, Title and Signature:



CSIRO

KHANH HO
SENIOR TECHNICAL OFFICER
INDUSTRIAL RESEARCH SERVICES