



Industrial Research Services

Materials Science & Engineering, 37 Graham Road (PO Box 56), Highett, Victoria 3190, Australia
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ABN 41 687 119 230

Registered Testing Authority - CSIRO

2 November, 2012

Our Ref. EN13/ 2178

TEST REPORT No: 6452.3

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	$\geq 0.5 \text{ N/mm}^2$	0.86 N/mm²	PASS
Tensile adhesion strength for Tasmanian Oak	$\geq 0.5 \text{ N/mm}^2$	1.07 N/mm²	PASS

The tiling system; Soudal SMX30P timber flooring adhesive, Batch: 1029997 001149, Merbau Hardwood and Tasmanian Oak on concrete base with 11.5% MC sample material had a mean pull off strength of 0.86 N/mm² and 1.07 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 with 11.5% MC in the concrete base. 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 & 11.5% MC
 In accordance with ISO 13007-2: - 4.4.4.3

28 Days Dry with 11.5% MC for Merbau Hardwood

Sample No.	Total Load Newton Force (kN)	Tensile Strength (MPa)	Tensile Strength (MPa) within 20% mean	Failure Mode
1	2.19	0.88	0.88	50% AF-S & 50% AF-T
2	2.94	1.18		5% AF-S & 95% AF-T
3	2.37	0.95	0.95	100% AF-S
4	1.86	0.74	0.74	100% AF-S
5	1.73	0.69	0.69	100% AF-S
6	2.45	0.98	0.98	100% AF-S
7	1.50	0.60		100% AF-S
8	2.31	0.92	0.92	100% AF-S
9	1.52	0.61		100% AF-S
10	2.12	0.85	0.85	100% AF-S
Mean	2.10	0.84	0.86	

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 with 11.5% MC** **0.86 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, 55% RH & 11.5% MC
 In accordance with ISO 13007-2: - 4.4.4.3

28 Days Dry with 11.5% MC for Tasmanian Oak

Sample No.	Total Load Newton Force (kN)	Tensile Strength (MPa)	Tensile Strength (MPa) within 20% mean	Failure Mode
1	1.88	0.75		95% AF-S & 5% CF-T
2	2.04	0.82	0.82	95% AF-S & 5% CF-T
3	2.76	1.10	1.10	70% AF-S & 30% CF-T
4	2.99	1.20	1.20	95% AF-S & 5% CF-T
5	3.12	1.25		100% AF-S
6	2.76	1.10	1.10	100% AF-S
7	1.98	0.79		95% AF-S & 5% CF-T
8	2.66	1.06	1.06	95% AF-S & 5% CF-T
9	2.84	1.14	1.14	95% AF-S & 5% CF-T
10	2.63	1.05	1.05	95% AF-S & 5% CF-T
Mean	2.57	1.03	1.07	

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.

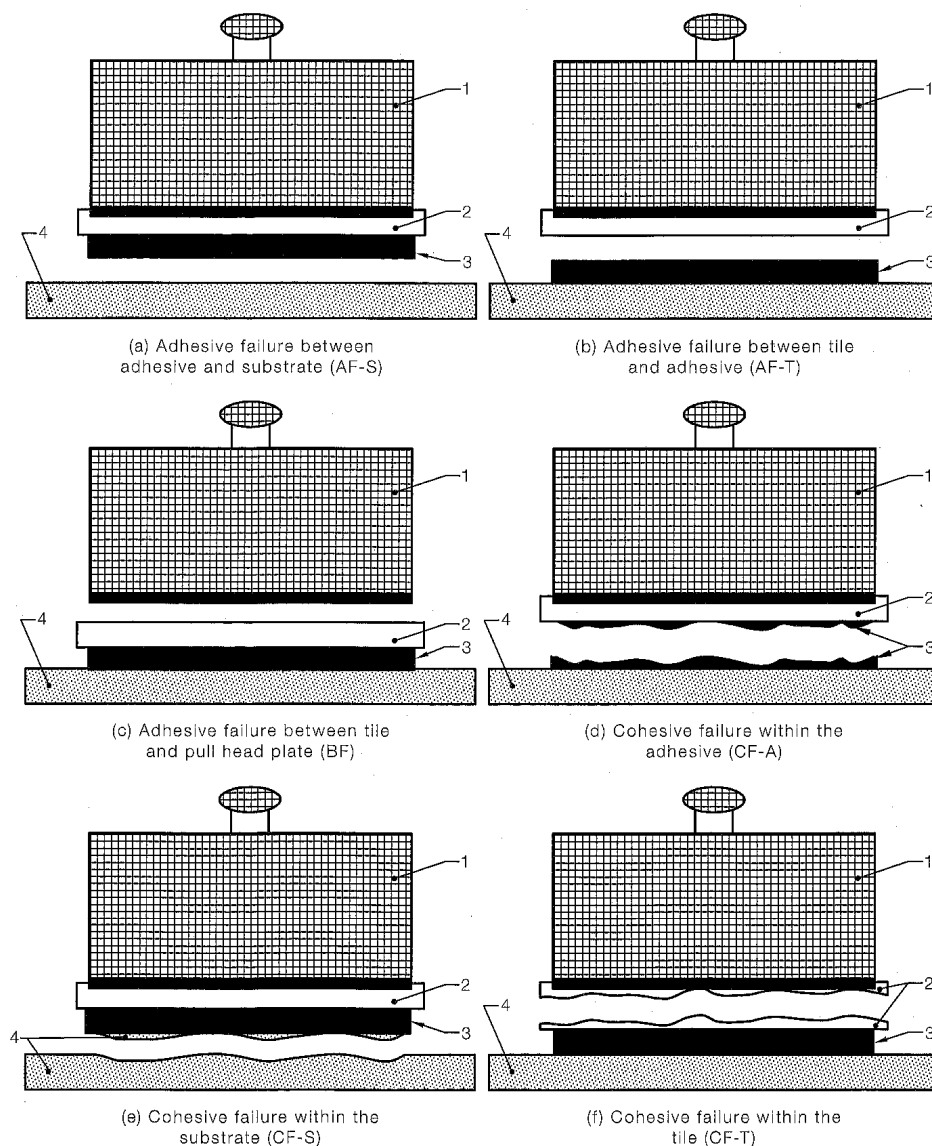
Requirements: Normal setting adhesives (C1): => 0.50 N/mm² Obligatory

Determination of Adhesion: **28 days dry with 11.5% MC** **1.07 N/mm²** **PASS**

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Informative annex from AS 4992:2006:

FAILURE MODES

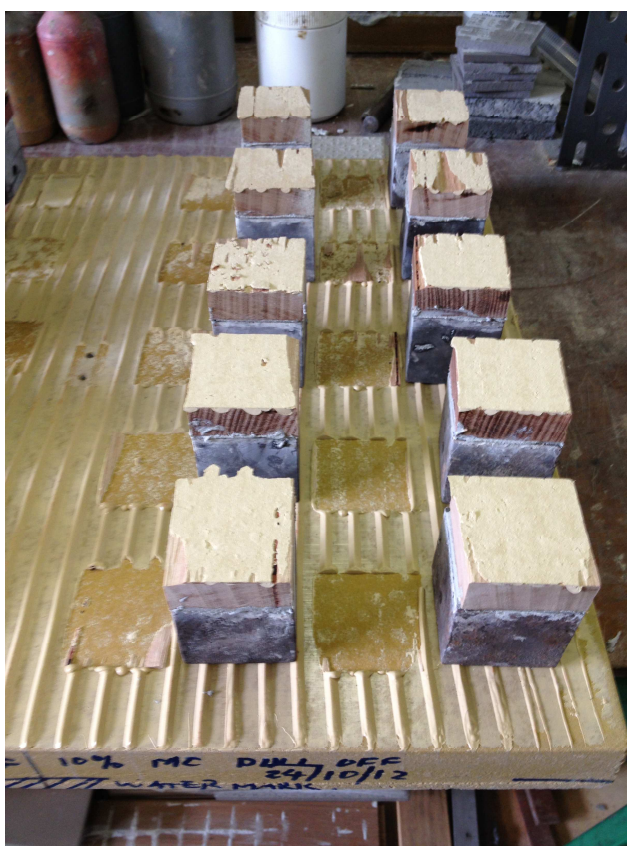


KEY:
 1 pull head plate
 2 test tile
 3 adhesive
 4 substrate (concrete slab)

Figure 3—Failure pattern

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Tensile strength test:





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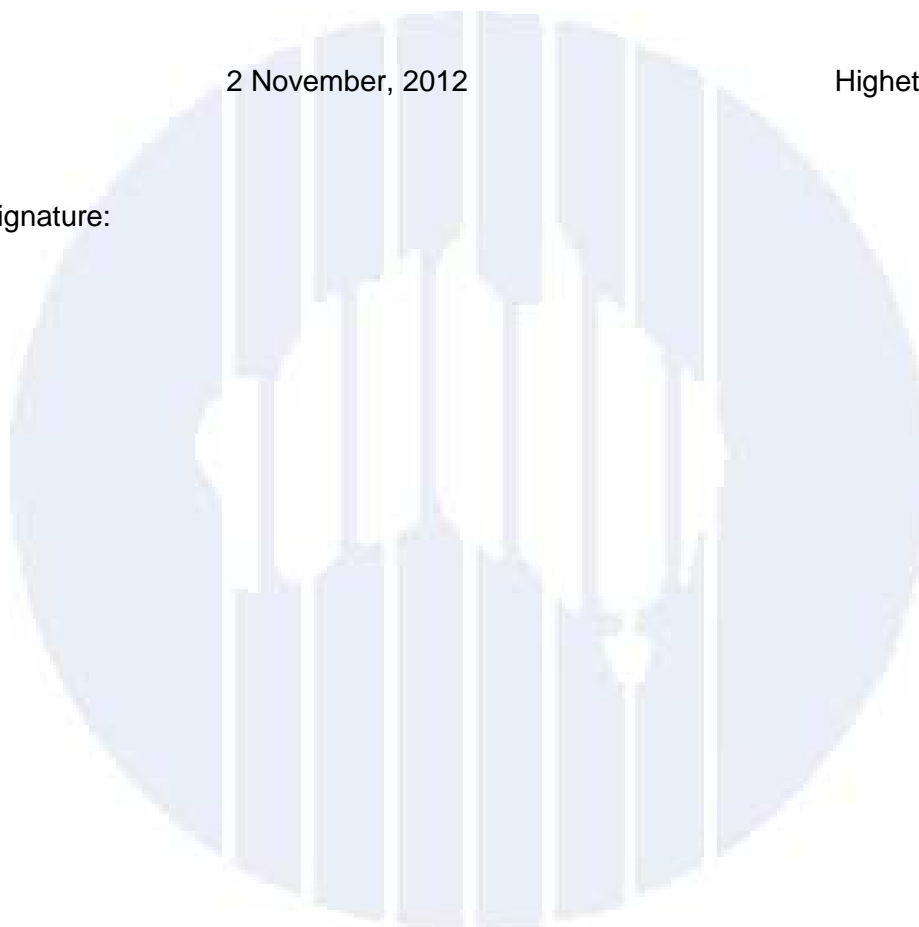
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Date and Place

2 November, 2012

Highett, Victoria

Name, Title and Signature:



CSIRO

KHANH HO
SENIOR TECHNICAL OFFICER
INDUSTRIAL RESEARCH SERVICES