TAYWOOD ◥ ENGINEERING ◥ LIMITED

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CLIENT: Australian Tech Dry

YOUR REF: Solid Silane Coating System

OUR REF: J/N: 2242-01

Certificate of Test No. 2807

Sample: Solid Silane

Date Received: 22 April 1999

From: Australian Tech Dry

Description & Condition: 2 x 1L containers of Solid Silane

TEST DESCRIPTION: REDUCTION IN CHLORIDE ION UPTAKE

Sample Preparation

Concrete cylinder substrates prepared in accordance with AS 1012.2-1994 "Methods of Testing Concrete. Method 2 : Preparation of Concrete Mixes in the Laboratory". Cylinders demoulded at 24 hrs them immersed and cured in limewater at 23±2°C to 28 days age. Substrates removed from limewater and air-dried In laboratory at 23±2°C and 50±20%RH for a minimum 7 days prior to coating. Substrates wire-brushed and air blasted to remove laitence and loose fragments prior to coating.

Coating system consisted of one coat Solid Silane applied at 500µm WFT. Application by brush to 200 x 100mm diameter concrete cylinder substrate by Taywood Engineering Limited (Perth). Coated samples cured 7 days in laboratory at 23±2°C and 50±20% RH prior to test.

Test Method

Test specimens weighed then placed in a salt-spray tank containing 5±0.5% NaCl solution at 60±2°C for 5 days. Samples removed, weighed, then oven-dried at 40±2°C for 2 days. Regime performed 4 cycles in total.

On completion, depth of penetration of treatment determined by exposing fresh face using hammer and chisel, misting with water and measuring using steel rule.

Cylinder samples crushed and pulverised to pass 150 µm sieve. Chloride content determined in accordance with BS1881:Part 124: 1988 "Methods for Analysis of Hardened Concrete: Section 10.2 except titration by potentiometric method.

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TEST RESULTS

Concrete Substrate Mix Proportions

TEL Lab No.	Component & Source	Mix
	Cement (kg/m^3)	
P18248	Type GP Cement (Cockburn Cement Ltd)	350
	Aggregate (kg/m^3)	
P18076	20mm Granite (Boral)	650
P15701	14/10mm Granite (CSR Readymix)	520
	7mm Granite (CSR Readymix)	145
	Jandakot Sand	630
	Water (L/m^3)	175
	Admixtures (mL/m^3)	
P16157	Pozzolith 322N (MBT Australia)	150
	Slump (mm)	85

5/7/99 — Tested by — Date

5.7.95 — Approved by — Date

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TEST RESULTS

TEL Lab No.		% Chloride by Weight of Concrete @ 33 days age	Reduction in Chloride absorbed (%) @ 33 days age	Depth of Penetration (mm)
P18301	Control	0.28		
P18302	Control	0.22		
	Mean	0.25		
P18297	Solid Silane	0.02		
P18298	Solid Silane	0.04		
	Mean	0.03	88	7
P18295	Solid Silane	0.05		
P18296	Solid Silane	0.03		
	Mean	0.04	84	5

Note: 1. P18295 and P18296 immersed in 0.1M KOH for 14 days, then oven dried at 40±2°C for 3 days prior to test.

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