



MANAGEMENT
ENGINEERING
ENVIRONMENT

CLIENT: Guardian Protective Coatings
PO Box 3337
Nedlands WA 6909

YOUR REF: Graffiti Shield WVT

OUR REF: J/N 61/12579/06

Certificate of Test No. 4688

Sample: Guardian Graffiti Shield

Date Received: 19 November 2004

Date Tested: 11 January 2005

From: Guardian Protective Coatings, Nedlands

Description & Condition: 1 -off container of Guardian Graffiti Shield, approximately 5L

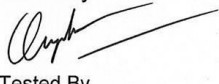
TEST DESCRIPTION: WATER VAPOUR TRANSMISSION

Sample Preparation:


Test pieces prepared on unglazed ceramic tiles by low pressure spray in 2 coats as wet on tacky. Nominal application rate 0.12 L/m²/coat. Test pieces cured for 2 weeks at 23±2°C prior to test.

Test Method:

ASTM Standard E96-00 "Water Vapour Transmission of Materials" Section 12 (Procedure for water method). The diffusion coefficient for water vapour (D_{H_2O}) was calculated using Fick's First Law of Diffusion. This test method complies with the requirements of AS/NZS 4548.5-1999 "Guide to long-life coatings for concrete and masonry Part 5: Guidelines to methods of test" Appendix C.


Tested By
N. Nguyen, Chemist

02/02/05
Date


Approved Signatory
A.M. Peek, Principal Materials Scientist



NATA Accredited Laboratory No. 2678.

This laboratory is accredited by the National Association of Testing Authorities, Australia. The tests reported herein have been performed in accordance with its scope of accreditation. This document shall not be reproduced except in full.

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Test Results:

GHD Sample No:	P25763
Client Identification:	Guardian Graffiti Shield
Nominal Dry Film Thickness, microns:	32
Vapour Transmission Rate of Composite, g/m ² /24 hour:	44.7
Vapour Diffusion Coefficient of Film, cm ² /sec:	1.1 x 10 ⁻⁰⁵
Diffusion Resistance Coefficient (μ):	22000
Equivalent Air Layer Thickness (S _D), m:	0.7
Estimated Vapour Transmission Rate for Unsupported Film, g/m ² /24 hour:	71
Permeance of Film, g/Pa s m ² :	2.9 x 10 ⁻⁰⁷

Notes:

1. Result shown is mean value from test pieces P25763A1 and P25763A2.
2. Nominal DFT calculated from total mass applied per area, wet density, and volume solids content.
3. S_D calculated from nominal dry film thickness.
4. Klopfer criterion for an effective anti-carbonation coating is S_D<4m.
5. Vapour Transmission Rate of unsupported film estimated from film diffusion coefficient. Permeance value calculated from this value.
6. These results apply only to the formulation as submitted for test. Changes in the nature, source, or proportion of any component may render these results invalid.