MASTER PROOFER APPLIED RESEARCH LABORATORIES

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Sealants, Road and Building Materials. Rubbers. Plastics. Corrosion

Research Laboratory Report
Reference: MP-07/024

Date 10th October 2007

Subject Consolidated test of general physical properties of cement mortar treated with **Labond CoralGel W860** Penetrative Crystallization Sub-surface Membrane

Instigator Master Proofer In-house Test from Technical Department

Introduction Four pieces of Cement mortar Block in size 1000 x 1000 x 200 are prepared as per following mixing formulation in according to HKHA/MTS(2002/2004) Specification Part D Clause 2.1.1

Sample ID	Mixing Description	Cement grade 300	Water	Sand
MP-F701-01	Control Mortar	100 kg	30liter	300 kg
MP-F701-02	General concrete	100 kg	25 liter	300 kg
MP-F701-03	Moderate Slab concrete	150 kg	40 liter	225 kg
MP-F701-04	Heavy Duty Concrete	150 kg	40 liter	26 5kg + 15 liter SBR additive

Date cast : 10th Sept 2007
Date test : 10th Oct 2007
Treatment : **Labond CoralGel W860**

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Report

1.0 Tests and Result

1.1 Application of W860

Physical Properties before Treatment of W860

Sample ID	Compressive Strength at 28 days N/mm2	MOHS Hardness Diamond = 10	COE of Friction ASTM C-1028-89
MP-W860-01	31	1.25	0.5
MP-W860-02	31	1.25	0.5
MP-W860-03	55	1.68	0.48
MP-W860-04	70	1.96	0.45

Water Permeability test after Treatment of of W860

Sample ID	Pressure Direction	Testing Pressure (Bar)	Observation
MP-W860-01(Control)	Front	1.5	Water-Leaking out
MP-W860-02	Front	4.0	No Leakage
MP-W860-03	Front	5.0	No Leakage
MP-W860-04	Front	8.0	No Leakage

Physical Properties after Treatment of of W860

Sample ID	Compressive Strength at 28 days N/mm2	MOHS Hardness Diamond = 10	COE of Friction ASTM C1028-89
MP-W860-01	31	1.25	0.6
MP-W860-02	31	1.82	0.6
MP-W860-03	55	2.10	0.6
MP-W860-04	70	2.45	0.6

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2.0 Chemical Resistance Properties Staining after Treatment of of W860

No staining of test sample was found after flushing of pigmented liquid for 15 minutes.

General Observation Test on Corrosion effect caused to Mortar treated after Treatment of of W860

with Labond CoralGel W860

Mineral Oil	No Defects
Crude Oil	No Defects
Unleaded Petrol	No Defects

Solvents

Xylene	No Defects
M.I.B.K.	No Defects
ISOPROPANOL	No Defects

Acids

5% Sulphide	No Defects
5% Nutric	No Defects

Bases

5% Sodium Hyfroxide	No Defects
10% Ammonia Solution	No Defects

Conclusion:

Cement Mortar treated with Labond CoralGel W860 will got significant improvement on water proofing abrasion resistance and Chemical Resistance; Treated surface reach an even anti-slip condition.

Tested Conducted by

Dr. William Lynch