NIPPON Concrete Metal Bonding Agent

(Previously known as Nippon C2M)

Description

NIPPON Concrete Metal Bonding Agent is a dual component system, consisting of Emulsion, a uniquely blended binding agent, and Powder, a super-fine specialized cement powder. It has the ability to bond with metal surfaces and provide a surface coating that encases and protects old deteriorating, ferrous products.

NIPPON Concrete Metal Bonding Agent is a universal coating which can be used as a primer base coat as well as a top coat depending on project requirements. When properly applied, it provides both the applicator and asset owner with a cost-effective infrastructure maintenance program. NIPPON Concrete Metal Bonding Agent is environmentally friendly due to its use of recycled industrial material, extremely low VOC level, and ease of application and use.

Basic Usage

NIPPON Concrete Metal Bonding Agent can also protect and restore ferrous materials from deterioration or further loss of structure through exposure to many naturally occurring elements. It also provides a unique method to bond metal substrates to concrete. Some common use-cases include:

- Concrete Encased Metal
- Metal Stairs and Ramps
- Corrosion Under Insulation (CUI)
- Exhaust Systems
- Corrugated and Metal Roofs
- Rebar
- Steel Structures
- Boilers and Furnaces
- Metal Doors
- Pipe Exteriors

NIPPON Concrete Metal Bonding Agent can also be used in some cases as a stand-alone solution, although more often as a part of a more complex solution utilizing other NIPPON products. Additionally, it may also be used as a functional primer or top-coat in other coating systems.

Benefits

- Simplified surface preparation
- Can be applied via brush, spray, or roll
- Remarkable ease of application
- Extends time between maintenance cycles
- Extremely cost effective
- Resists abrasion, freeze/thaw, thermal shock
- Extreme climate resistance (-80 to +500F)
- Ease of clean-up (only water)
- Odorless
- Minimal labor requirements
- Uniquely flexible (up to 90 degrees)
- Resists various chemical environments

Properties

NVW (%)	: 7.5
pH	: 7.5
Visc (cps)	: 0
MFFT (°C)	: 300
Elongation at break (%)	: 80
Koenig Hardness (s)	: 40

Surface Preparation

Remove all loose rust and debris of rusted substrates using brass wire brush.
Application surfaces must be structurally sound, as the asset's overall integrity is crucial for the success of any coating or overlay.

Application Guide

Mixing Ratio (by Volume)	: 1:1
Recommended DFT (µm)	: 120
Application Method	: By spray, brush or roller North-South followed by East-West direction
Number of Coats	: 2-3 Coats
Theoretical Coverage	: 0.45 litre / m2
Touch Dry Overcoating	: Min 2 hours : 2 hours

Test Performed

Items	Proc-Rev	Result
Exempt Compounds ASTM D6886	6886-1.0	<0.1 Wt %
Non-Volatile Matter ASTM D2369	1194-1.1	27.67 Wt %
VOC Content (ISO 11890-2)	--	5.5 g/L
Water by Karl Fischer ASTM D6304	6304-1.9	68.21 Wt %
Density by Pycnometer Method ASTM D70	0070-1.0	1.054 g/mL
TVOC (SGBC min. Criteria ≤0.50)		0.001 mg/m^3
Formaldehyde Emission (SGBC min. Criteria ≤0.10)		0.008 mg/m^3

Product has also been tested to the following standards:
ISO 12944 / ASTM B117-11 / ASTM D1654 / ASTM B117-D1654 / ASTM D3359 / ASTM D4060 / ASTM D4541

NOTE: Water content was performed per ASTM D6304 Karl Fischer Coulometric Titration; density was performed per ASTM D70 (Pycnometer Method), which are applicable alternatives based on sample matrix. D6886 Exempt Compounds and D70 Density were subbed out.

Shelf Life

Shelf life of the product should be at least 36 months at 25◦C if stored in a moderately cool, dry environment and in tightly sealed container. Shelf life from date of manufacture, when stored in original, unopened containers. Subject to re-inspection thereafter. Higher temperature during storage may reduce the shelf life and may lead to gelling in the tin. Frequent temperature cycles may also shorten the shelf life. Store in tightly closed container in a dry, cool and well-ventilated space, keep away from sources of heat and ignition.

Packaging

Unit : 18.95 litre (Powder)
: 18.95 litre (Emulsion)

Disclaimer

Refer to our Material Safety Data Sheet (MSDS) regarding regulatory compliance, safety, hazards, spill procedures and disposal of this product.

While the descriptions, designs, data and information contained herein are presented in good faith and believed to be accurate, it is provided for your guidance only. Because many factors may affect processing or application/use, we recommend that you make tests to determine the suitability of a product for your particular purpose prior to use.

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