Concrete Barrier Protection

Hi-Guard Protective Cementitious Coating

CONCRETE PROTECTION

Simple Application

Nano-Slag Cement Technology

Long Life and Track Record

Hi-Guard is the longest "proven track record" coating (>30 years) for concrete structures to protect from rebar corrosion caused by chlorides and carbonation. In addition, it also provides the protection from freeze-thaw damages or erosion problem in sever environment.

Hi-Guard provides the highest level of protection by special formulated pre-mixed powder polymer mortar containing nano-blast furnace slag cement technology from Japan.

Features

- More durable than any other mortar and epoxy coatings.
- Highest level of protection for chloride corrosion by fixing chlorides.
- Can be applied on wet concrete.
- Extremely high bonding strength to substrate concrete for long time (>2.5 N/mm^2)
- High resistance to water permeation (< 1.2%).
- Best protection for freeze-thaw damages and carbonation.
- Environmental safe (No VOC).
- Easy preparation, Just add water and mix.
- Can be readily applied by spraying, brushing or rollers due to the low viscosity.

Applications

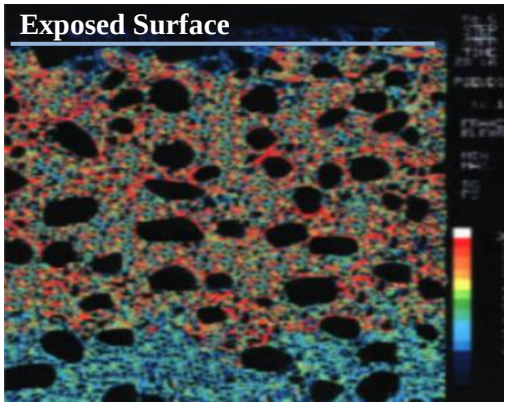
- Coastal and marine structures subject to chloride corrosion.
- Bridges exposing to de-icing salt.
- Tunnel concrete walls to prevent carbonation.
- Dams, retaining walls, river embankment, and road subject to frost damages.
- All concrete structures requiring an addition durability.

Physical Characteristics at 20°C

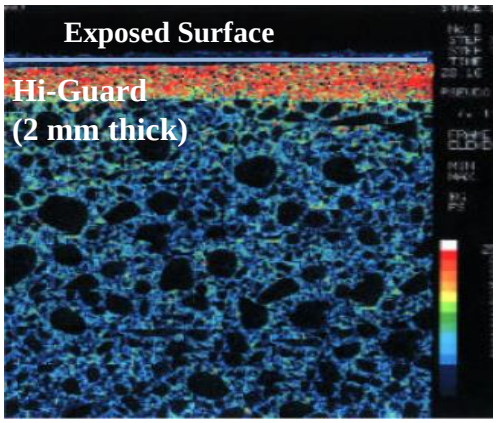
Item	No. of days	Strength (N/mm^2)
Compressive Strength	7 days	39.3
	28 days	47.6
Flexural Strength	7 days	7.4
	28 days	10.3
Bond Strength	28 days	2.6

Hi-Guard Protective Cementitious Coating

21 Years Old Jetty - Chloride Distributions in Concrete



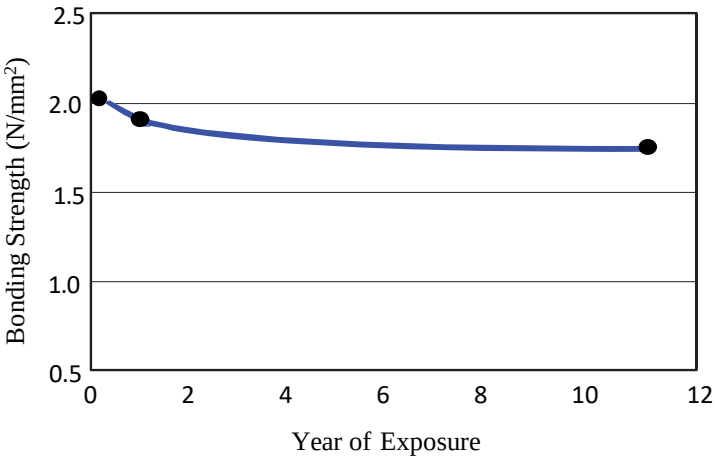
High Density Concrete (No Hi-Guard)



Hi-Guard on High Density Concrete

Red dots show chlorides penetrated in concrete.

Bonding Strength to Concrete with Time



Application Procedures

Concrete Surface Preparation
(High Water Pressure)

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Mixing Hi-Guard for 3 minutes
(3.5 litters to one bag)

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Apply 1st Coat (1 mm thick)

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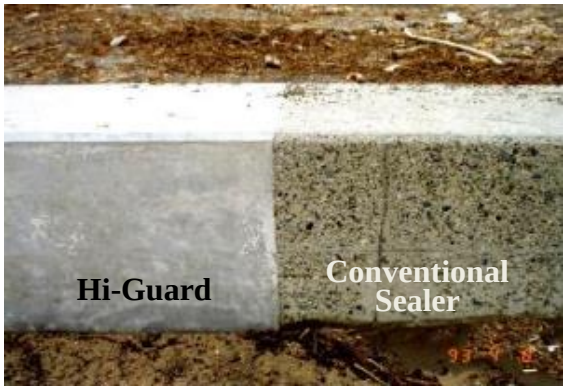
Apply 2nd Coat (1 mm thick)

Note: One 20 kg bag covers approx. 6 m² of concrete surface at 2 mm thickness.



High Erosion Resistance (13 years old)