

NIPPON HW

Concrete Hardening/Water Resistant Solution

Description

NIPPON HW is a dual purpose product. It provides long lasting protection against water infiltration, and deep introduction of a catalytic chemistry that reacts directly to alkali. It creates alkali hydrates that will become a complex silica hydrogel that bonds within the voids found in concrete. NIPPON HW will pass around various aggregates and fill empty spaces in the concrete matrix. The alkali will be turned into a natural compound, this will lessen other further reactions.

NOTE: NIPPON HW is not a structural or restorative product and should only be used on substrates that are structurally sound.

Basic Usage

NIPPON HW will not alter the appearance of the surface or physical characteristics and will enhance surface traction quality, making it ideal for use on all new or existing concrete installations including bridges, decks, streets, airport runways, basements, parking garage decks, sidewalks, driveways, slabs, etc.

- NIPPON HW will enhance the bond between the concrete surface and the coating by increasing the density of the surface of concrete substrates.
- Provides long term protection of alkali silicate reaction and the effects of alkali- aggregate.
- Provides long term effective internal protection from the environment in concrete.
- NIPPON HW can access alkali up to 100mm to 150 mm (3" to over 5") in typical batch mix concrete.
- NIPPON HW will help add density to the upper portion of the concrete.
- Zero VOC, water-borne and can be used over large bodies of water without harm.
- Easy on equipment and fast cleanup.

Standards

ASHTO CRD and ASTM tests.

CRD C48-73-ASTM C192-ASHTO T260-ASTMC-156-ASTM CD-4541-ASTM-666-ASTM C-309-AASHTO T-259-ASTM-672.

Shelf Life

Shelf life is expected to be 5 years if container is new/sealed and stored in a cool, dry environment.

Before You Apply:

NIPPON HW has a highly reactive catalytic agent in a waterborne proprietary colloidal silicate base that produces a silica hydrogel below the surface and inside the concrete matrix. NIPPON HW cannot function if there are: (1) Other sealers on the concrete surface, this includes any NIPPON CP that remains on the substrate from prior applications. (2) Polymers in the mix

Precautions:

- Protect/cover all glass in and around the work area. NIPPON HW will etch glass if it comes in contact.
- Cover everything not intended to be treated. Incidental damage may occur on unintended surfaces.
- Spills or spray droplets in contact with glass should be removed immediately by flushing with water.
- Some discoloration of aluminum may occur.
- Do not proceed with application of NIPPON HW when ambient temperature and/or substrate temperatures are less than 40°F/4.5°C or forecasted to drop below 40°F/4.5°C during the next 6 hours.

HVLP-Spray Protocol

NIPPON HW spray application for small/restricted areas can be achieved with the use of HPLV spray equipment. Pressure and atomization are the key elements.

2000 PSI-138 bar is essential for proper application. This allows for proper separation of the active ingredients and the carriers which allows for integration and penetration of NIPPON HW. This spec can be found in a HPLV system.

Regulated spray pot pressure will apply best at 20-100 PSI / 1-7 Bar, this will be equal or slightly less at the fluid nozzle or tip at the gun/the length of spray lines.

Air pressure at the air cap on the gun should be at 40-80 PSI / 3-6 Bar to give the spray a finer mist.

A smaller tip size found in the HPLV equipment allows for less over spray, better containment of waste, faster application times, and reducing cost.

Larger airless equipment is better served for higher square meter / square foot projects where hoses and over-spray are less likely to affect the outcome.

Physical Properties

Physical	liquid
Pack Size	18.95 litres (5 gallons)
Color	Clear
Odor	None
Specific Gravity	1.11±
Flash Point	None
pH	12±
Toxicity	None
Boiling Point	212°F / 100°C
Freeze Temperature	32°F / 0°C
Hazardous Vapors	None
Weight Per Gallon	9.18 lbs/4.16kg
Environmental Impact	Neutral
User-Friendly	Yes
Freeze Harm	None (allow to thaw completely)
Surface Bond Quality	Excellent
VOC/VOS content	None
Resistance to UV	Excellent
Paintable	Yes
Boiling Point	212°F / 100°C
Waste Disposal Methods	Non-Hazardous
Resistance to Abrasion	Excellent
Polymerization	None
Solids Before Applied	None
Solids After Applied	100%
Coverage	150-200 sq.ft. per US gallon/3.5m-4.9m ² per liter

Drying Time

Substrate temperature	: 25 deg C	40 deg C
Surface Dry	: 1hr 45 min	30 mins
Through Dry	: 7 days	7 days
Cured	: 28 days	21 days
Dry to recoat (min) by itself	: 15-30 mins	15-30 mins
Dry to recoat (Max) by itself	: Extended	Extended

Cure Time

NIPPON HW does not cure in the traditional sense of "drying" once inside concrete. Do pay special attention to application and do not let it pool. Disperse with a broom or brush if necessary. If NIPPON HW is applied to new concrete, the new concrete must be cured for 28 days prior to application of NIPPON HW.

Cure Time When in Use with other Top Coat

When NIPPON HW is applied onto existing concrete, you must wait 72 hours before applying any other coatings. If NIPPON HW is applied to new concrete, the new concrete must be cured for 28 days prior to application of NIPPON HW.

Cure Time When in Use with NIPPON C2M and Other Top Coat

When NIPPON HW is applied onto existing concrete, you must wait 24 hours before applying NIPPON C2M. After applying NIPPON C2M, you must wait for 4 hours before applying any other Top Coat.

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. NO WARRANTIES OF ANY KIND, EITHER EXPRESS OR IMPLIED, INCLUDING WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE, ARE MADE REGARDING PRODUCTS DESCRIBED OR DESIGNS, DATA OR INFORMATION SET FORTH, OR THAT THE PRODUCTS, DESIGNS, DATA OR INFORMATION MAY BE USED WITHOUT INFRINGING THE INTELLECTUAL PROPERTY RIGHTS OF OTHERS. IN NO CASE SHALL THE DESCRIPTIONS, INFORMATION, DATA OR DESIGNS PROVIDED BE CONSIDERED A PART OF OUR TERMS AND CONDITIONS OF SALE.