



SAFETY DATA SHEET

SDS Number: SDS/OTH-0037

Version No: 003

1. IDENTIFICATION OF THE SUBSTANCE / MIXTURE AND OF THE COMPANY / UNDERTAKING

Product Name:	NIPPON PAINT FLOORSHIELD 842 LIQUID HARDENER
Intended Use:	Single-component Monolithic Surface Hardening Compound for Floor Application
Distributed:	Nippon Paint (S) Co. Pte Ltd No. 1 First Lok Yang Road Jurong Singapore 629728
Emergency Phone Number:	(65) 6 265 5355
Fax Numbers:	(65) 6 264 1603

2. HAZARDS IDENTIFICATION

GHS Classification:

Physical Hazard

Not classified as an physical hazard under GHS criteria

Health Hazard

Skin Corrosion/Irritation – Category 1

Serious Eye Damage – Category 1

Specific Target Organ Toxicity, Single Exposure – Category 3 (Respiratory system)

Environment Hazard

Not classified as an environmental hazard under GHS criteria

GHS Pictogram



Signal Word

Danger

Hazard statements

H314 Causes severe skin burns and serious eye damage

H335 May cause respiratory irritation

Precautionary statements

P261 Avoid breathing fume/mist/vapours/spray.

P264 Wash hands and forearms thoroughly after handling.

P271 Use in a well-ventilated area.

P280 Wear protective gloves/protective clothing/eye protection/face protection.

Response

P301+P330+P331 IF SWALLOWED: rinse mouth. Do NOT induce vomiting.

P303+P361+P353 IF ON SKIN (or hair): Remove/ Take off immediately all contaminated clothing.

Rinse skin with water/ shower.

P304+P340 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable to breathing.

P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a poison center or doctor/physician.

P310 Immediately call a POISON CENTER or doctor/ physician.

P363 Wash contaminated clothing before reuse.

Storage

P402+P233 Store in a well-ventilated place. Keep container tightly closed.

P405 Store locked-up.

Disposal

P501 Dispose of contents/container in accordance with local/national regulations.

3. COMPOSITION / INFORMATION ON INGREDIENTS

<u>Substances</u>	<u>CAS No.</u>	<u>%</u>
Sodium Silicate solution	1344-96-8	<i>Undisclosed; Proprietary</i>

4. FIRST-AID MEASURES

INHALATION

- Move person to fresh air and call for medical assistance immediately.
- If not breathing, give artificial respiration, if breathing is difficult, give oxygen. Keep at rest.

SKIN CONTACT

- In case of contact, immediately flush skin with large amounts of water and soap while removing contaminated clothing and shoes.
- If irritation persists, get medical attention.

EYE CONTACT

- Immediately flush eyes with large amounts of water until irritation subsides.
- Remove contact lens
- Obtain medical attention, preferably by an ophthalmologist, immediately.

INGESTION

- DO NOT induce vomiting unless directed to do so by a medical personnel. Never give anything by mouth to an unconscious person. Keep at rest. Get medical attention immediately.

5. FIRE FIGHTING MEASURES

SUITABLE FIRE EXTINGUISHING MEDIA

- Alcohol-resistant foam, Carbon dioxide, or dry chemical type

SPECIFIC HAZARDS ARISING FROM THE CHEMICAL

- Combustion products may include and are not limited to: Carbon monoxide and Carbon dioxide.

SPECIAL PROTECTIVE ACTIONS FOR FIRE FIGHTERS

- Wear full protective clothing and NIOSH-approved self-contained breathing apparatus.
- Use water spray to cool fire-exposed surfaces and to protect personnel. If a leak or spill has not ignited, use water spray to disperse the vapours.
- If possible, isolate product from heat, electrical equipments, sparks and open flames.
- Avoid spraying water directly into storage containers.

- Closed containers may explode when exposed to extreme heat.
- Avoid spreading burning liquid with water, isolate liquid.
- Do not allow run-off from fire fighting to enter drains or watercourses.

6. ACCIDENTAL RELEASE MEASURES

PERSONAL PRECAUTIONS, PROTECTIVE EQUIPMENT AND EMERGENCY PROCEDURE

- Wear appropriate protective equipment, e.g. respirators, eye protection, gloves and safety shoes.
- Avoid substance contact with eyes. Do not inhale vapours.
- Ensure supply of fresh air in enclosed rooms.

ENVIRONMENTAL PRECAUTIONS

- Eliminate sources of ignition.
- Keep public away.
- Contain spilled liquid with sand or other non-combustible absorbent materials
- Wash area and prevent runoff into drains and sewerage system.
- Advise authorities if substance has entered a watercourse or sewer or has contaminated soil or vegetation.

METHODS AND MATERIALS FOR CONTAINMENTS AND CLEANING UP

- Clean up all spills immediately.
- Absorb spill with absorbent and inert material, then place in container.
- Disposal in accordance to local/national regulations.

7. HANDLING AND STORAGE

PRECAUTIONS FOR SAFE HANDLING

- Use appropriate personal protective equipment
- Keep out of reach of children.
- Handle containers with care. Open slowly in order to control possible pressure release.
- Do not pressurize containers.
- Do not ingest. Do not breathe in gas/fumes/vapour. Avoid contact with skin and eyes.
- For personal protection, see section 8.
- Use only in areas from which all naked lights and other sources of ignition have been excluded.
- Take precautionary measures against static discharge
- Protect from frost and extremes of temperature.

CONDITIONS FOR SAFE STORAGE, INCLUDING ANY INCOMPATIBILITIES

- Keep containers tightly closed.
- Containers that are opened should be properly resealed and kept upright to prevent leakage.
- Store in cool, dry and well-ventilated place at temperature between 20°C to 40°C away from heat and sources of ignition.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

CONTROL PARAMETERS/OCCUPATIONAL LIMITS

Sodium Silicate solution, CAS No. 1344-96-8, Long-term PEL = 2 mg/m³

APPROPRIATE ENGINEERING CONTROL MEASURES

- Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapours below their respective occupational exposure limits.
- Ensure eyewash stations and safety showers are close to the workstation location.

PERSONAL PROTECTION

Respiratory Protection:	Use of NIOSH-approved respirators with organic vapour cartridges is recommended.
Hand Protection:	Use of solvent resistance type or chemical resistant type of protective gloves is recommended.
Eye Protection:	Use of safety glasses or goggles with side shields is recommended.
Skin / Body Protection:	Wear chemical resistant clothes and safety shoes when handling product.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	:	Liquid
Odour	:	Not available
Odour threshold	:	Not available
pH	:	11 – 12 (wet)
Melting point/freezing point	:	Not applicable
Initial boiling point and boiling range	:	Not applicable
Flash point	:	Non-flammable
Evaporation rate	:	Not available
Flammability (solid, gas)	:	Not applicable
Lower flammability or explosive limit	:	Not applicable
Upper flammability or explosive limit	:	Not applicable
Vapour pressure	:	Not available
Vapour density	:	Not available
Relative density	:	Not available
Solubility	:	Miscible
Partition coefficient	:	Not available
Auto-ignition temperature	:	Not applicable
Decomposition temperature	:	Not available
Viscosity	:	Not available
Specific Gravity	:	Approx. 1.21

10. STABILITY AND REACTIVITY

REACTIVITY

- No dangerous reaction known under condition of normal use.

CHEMICAL STABILITY

- The product is stable under recommended storage and handling conditions. (see section 7)

POSSIBILITY OF HAZARDOUS REACTION

- Under normal conditions of storage and use, hazardous reaction will not occur.

CONDITIONS TO AVOID

- Keep away from oxidising agents, strongly alkaline and strongly acidic materials in order to avoid exothermic reactions. Avoid all possible sources of ignition (spark or flame). Do not pressurize, cut, weld, braze, drill, grind or expose containers to heat or sources of ignition.

HAZARDOUS DECOMPOSITION PRODUCTS

- When exposed to high temperatures may produce hazardous decomposition products such as carbon monoxide, carbon dioxide, oxides of nitrogen and smoke.

11. TOXICOLOGICAL INFORMATION

This product has not been tested and all the toxicological statements have been derived from the respective components' available toxicity information.

Acute toxicity

Experimental/calculated data:

LD50, oral: > 5,000 mg/kg

LD50, dermal: > 5,000 mg/kg

LC50, inhalation: 22 mg/L

Skin and Eye Irritation

This product contains the ff. component classified as skin / eye irritant:

Sodium Silicate solution, CAS No. 1344-96-8: Skin Irritant (Category 1); Eye Irritant (Category 1)

Respiratory / Skin sensitization

The product is not expected to cause any allergic skin reaction and/or allergy or asthma symptoms and/or breathing difficulties if accidentally inhaled. However, the product may irritate the respiratory system through inhalation.

Carcinogenicity / Developmental toxicity / Reproductive toxicity

The product has no known carcinogenic effect, is not expected to cause developmental toxicity and has no known negative reproductive effects.

Specific target organ toxicity (single and repeated exposure)

This product may cause respiratory irritation in single exposure and may cause damage to the respiratory system on prolonged and repeated exposure.

12. ECOLOGICAL INFORMATION

The following ecological assessment is based on the available ecotoxicity information of the product's components.

Acute toxicity to the aquatic environment

Toxicity to fish: LC50 (96h): > 100 mg/l (OECD Guideline 203, static)

Toxicity to aquatic invertebrates: LC50 (96h): > 100 mg/l (OECD Guideline 203, static)

Toxicity to algae: LC50 (96h): > 100 mg/l (OECD Guideline 203, static)

This product is not toxic/harmful to aquatic life.

Bioaccumulation

This product has a low bio-concentration factor (BCF).

Biodegradability

This product is classified as non-biodegradable..

13. DISPOSAL CONSIDERATIONS

The product should not be allowed to enter drains and watercourses.

Preferred methods of waste disposal are incineration or biological treatment in federal/state approved facility. Empty containers should be recycled or disposed through an approved waste management facility or licensed contractor.

All federal, state and local environmental regulations shall be observed.

14. TRANSPORT INFORMATION

Transport to be in accordance with ADR/RID for road, IMDG for sea and IATA for Air.

LAND TRANSPORT

Not classified as Dangerous Goods by the criteria of the European Agreement concerning the international carriage of Dangerous Goods (ADR) by Road & Regulations concerning the international carriage of Dangerous goods (RID) by Rail.

SEA TRANSPORT

Not classified as Dangerous Goods by the criteria of the International Maritime Dangerous Goods Code (IMDG Code) for transport of Sea.

SEA (Annex II of MARPOL 73/78 and the IBC code)

Not applicable

AIR TRANSPORT

Not classified as Dangerous Goods by the criteria of the International Air Transport Association (IATA) Dangerous Goods Regulations for transport by Air.

15. REGULATORY INFORMATION

Applicable national regulations:

- Standards on Hazard communication for hazardous chemicals and dangerous goods
 - SS 586 : Part 1: 2014- Transport and storage of dangerous goods
 - SS 586 : Part 2: 2014- GHS of classification and labelling of chemicals- Singapore's adaptations
 - SS 586 : Part 3: 2008- Preparation of safety data sheets (SDS)
- MOM: Workplace Safety and Health Act & Workplace Safety and Health (General Provisions) Regulations
 - This product is subject to SDS, labelling, PEL and other requirements in the Acts/Regulations
- NEA: Environmental Protection and Management Act & Environmental Protection and Management (Hazardous Substances) Regulations.
 - This product is not subject to control under this Acts/Regulations
- SCDF: Fire Safety Act & Fire Safety (Petroleum and Flammable Materials) Regulations
 - This product is subject to the requirement of this Acts/Regulations
- SPF: The Arms and Explosive Act, the Arms and Explosives (Explosives) Rules, and the Arms and Explosives (Explosive Precursors) Rules
 - This product is not subject to the requirement of this Acts/Regulations

16. OTHER INFORMATION

Revision date: 19-Dec-2016

Abbreviation

ACGIH American Conference of Governmental Industrial Hygienists

TLV Threshold limit value

TWA Time-Weighted Average

OSHA Occupational Safety and Health Administration

PEL Permissible Exposure Limit

LD50 Lethal Dose

LC50 Median lethal concentration

IACR International Agency for Research in Cancer

Disclaimer

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