

### SECTION 1: Identification

#### 1.1. Identification

Product form : Mixture  
 Trade name : NIPPON CONCRETE METAL BONDING AGENT (Emulsion)  
 Other means of identification : (Emulsion) Binding Agent

#### 1.2. Recommended use and restrictions on use

Use of the substance/mixture : None

#### 1.3. Supplier

**Supplier**  
 NIPPON PAINT (SINGAPORE) CO. PTE LTD  
 1, FIRST LOK YANG ROAD, JURONG,  
 SINGAPORE 629728  
 T | (65) 6265 5355

#### 1.4. Emergency telephone number

Emergency Contact (24-Hour-Number) : (65) 6265 5355

### SECTION 2: Hazard(s) identification

#### 2.1. Classification of the substance or mixture

##### GHS-US Classification

Skin irrit. 2 H315  
 Eye irrit. 2A H319  
 Repr. 2 H361

#### 2.2. GHS Label elements, including precautionary statements

##### GHS-US labeling

Hazard Pictograms (GHS-US)



Signal Word (GHS-US) : WARNING  
 Hazard Statements (GHS-US) : Causes skin irritation  
 Causes serious eye irritation  
 Suspected of damaging fertility or the unborn child  
 Precautionary Statements (GHS-US) : Wear protective gloves/protective clothing/protective eyewear/face protection  
 If on skin: Wash with plenty of soap and water.  
 If in eyes: Rinse with water for several minutes. Remove contacts. Continue rinsing.  
 If exposed or concerned: Get medical attention.  
 Specific treatment (see clothing, heat, eye, face protection on this SDS).  
 If skin irritation occurs: Get medical advice/attention.  
 If eye irritation persists: Get medical advice/attention.  
 Remove contaminated clothing and wash before reuse.  
 Store locked up.

#### 2.3. Other hazards which do not result in classification

Other hazards not contributing to the classification: None

#### 2.4. Unknown acute toxicity (GHS US)

Not data available

### SECTION 3: Composition/Information on ingredients

#### 3.1. Substances

Not applicable

#### 3.2. Mixture: Hazardous Ingredients

Ingredients:	CAS No.	Percentage
1-methyl-2-pyrrolidone	872-50-4	<5%
2-methylisothiazol-3(2H)-one	2682-20-4	<0.25%
2-dimethylaminoethanol	108-01-0	<1.5%
1,2-benzisothiazol-3(2H)-one, 1,2-benzisothiazolin-3-one	2634-33-5	<0.25%

**SECTION 4: First-aid measures****4.1. Description of first aid measures**

First-aid measures general	: Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice (show the label where possible).
First-aid measures after inhalation	: Allow victim to get fresh air. Allow victim to rest.
First-aid measures after skin contact	: Wash with plenty of soap and water. Wash contaminated clothing before reuse. If skin irritation occurs, get medical advice/attention.
First-aid measures after eye contact	: Rinse with water for several minutes. Remove contact lenses. Continue rinsing. If eye irritation persists, get medical advice/attention.
First-aid measures after ingestion	: Rinse mouth. Do NOT induce vomiting. Obtain emergency medical attention.

**4.2. Most important symptoms and effects (acute and delayed)**

Symptoms/injuries	: Suspected of damaging fertility or the unborn child
Symptoms/injuries after eye contact	: Causes serious eye irritation
Symptoms/injuries after skin contact	: Causes skin irritation

**4.3. Immediate medical attention and special treatment, if necessary**

No additional information available

**SECTION 5: Fire-fighting measures****5.1. Suitable (and unsuitable) extinguishing media**

Suitable extinguishing media	: Foam. Dry powder. Carbon dioxide. Water spray. Sand.
Unsuitable extinguishing media	: Do not use a heavy water stream.

**5.2. Specific hazards arising from the chemical**

Reactivity	: No data available.
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**5.3. Special protective equipment and precautions for fire-fighters**

Firefighting instructions	: Use water spray or fog for cooling exposed containers. Exercise caution when fighting any chemical fire. Prevent fire-fighting water from entering environment.
Protection during firefighting	: Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing. Do not enter fire area without proper protective equipment, including respiratory protection.

**SECTION 6: Accidental release measures****6.1. Personal precautions, protective equipment and emergency procedures****6.1.1 For non-emergency personnel**

Emergency procedures	: Ventilate spillage area. Evacuate unnecessary personnel.
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**6.1.2 For emergency responders**

Protective equipment	: Do not attempt to take action without suitable protective equipment. For further information refer to section 8: "Exposure controls/personal protection". Equip cleanup crew with proper protection.
Emergency procedures	: Ventilate area.

**6.2. Environmental precautions**

Avoid release to the environment. Prevent entry to sewers and public waters. Notify authorities if liquid enters sewers or public waters.

**6.3. Methods and material for containment and cleaning up**

Methods for cleaning up	: Take up liquid spill into absorbent material. Soak up spills with inert solids, such as clay or diatomaceous earth as soon as possible. Collect spillage. Store away from other materials.
Other information	: Dispose of materials or solid residues at an authorized site.

**6.4. Reference to other sections**

For further information refer to section 13. See Heading 8. Exposure controls and personal protection.

**SECTION 7: Handling and storage****7.1. Precautions for safe handling**

Additional hazards when processed	: Good ventilation of the workplace required.
Precautions for safe handling	: Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Provide good ventilation in process area to prevent accumulation of vapor.

Obtain special instructions before use. Do not handle until all safety precautions have been read and understood.

Handling temperature : 5 – 30 °C  
 Hygiene measures : Wash hands and other exposed areas with mild soap before any other activity.

### 7.2. Conditions for safe storage, including any incompatibilities

Technical measures : Once opened, product can be stored for 2-3 months (max) in a closed container.  
 Storage conditions : Keep container closed when not in use. Protect against frost and freezing.  
 Incompatible products / materials : Strong bases. Strong acids. Sources of ignition.  
 Maximum storage period : 40 Months in original new/sealed container and stored in a cool/dry environment  
 Special storage instructions : If emulsion is stored for a long period of time, agitate well before mixing with powder  
 Storage temperature : 10 – 30 °C

## SECTION 8: Exposure controls/personal protection

### 8.1. Control parameters

No additional information available

### 8.2. Exposure controls

Personal protective equipment : Avoid all unnecessary exposure  
 Hand protection : Wear protective gloves  
 Eye protection : Wear chemical goggles or safety glasses  
 Skin and body protection : Wear suitable protective clothing  
 Respiratory protection : Wear appropriate mask  
 Other information : Do not eat, drink or smoke during use.

## SECTION 9: Physical and chemical properties

### 9.1. Information on basic physical and chemical properties

Physical state : Liquid  
 Color : White  
 Odor : Little to no odor, slightly amine like  
 Odor threshold : No data available  
 pH : 7 – 8  
 Melting point : 0 °C  
 Freezing point : 0 °C  
 Boiling point : 100 °C  
 Flash point : No data available  
 Relative evaporation rate (butyl acetate=1) : No data available  
 Flammability (solid, gas) : No data available  
 Vapor pressure : 2.3 kPa  
 Relative vapor density at 20 °C : No data available  
 Relative density : No data available  
 Specific gravity / density : 1.06 g/cm<sup>3</sup>  
 Solubility : Soluble in water.  
 Log Pow : No data available  
 Log Kow : No data available  
 Auto-ignition temperature : No data available  
 Decomposition temperature : No data available  
 Viscosity, kinematic : No data available  
 Viscosity, dynamic : 30 – 200 mPa.s  
 Explosion limits : No data available  
 Explosive properties : No data available  
 Oxidizing properties : No data available  
 Percents Solids : 39 – 41%

## SECTION 10: Stability and reactivity

### 10.1. Reactivity

No data available.

### 10.2. Chemical stability

Stable under normal conditions

### 10.3. Possibility of hazardous reactions

Not established

### 10.4. Conditions to avoid

Direct sunlight. Freeze/thaw conditions. Extreme temperatures.

**10.5. Incompatible materials**

Strong acids. Strong bases.

**10.6. Hazardous decomposition products**

Fume. Carbon monoxide. Carbon dioxide.

**SECTION 11: Toxicological information**

**11.1. Information on toxicological effects**

<b>1,2-benzisothiazol-3(2H)-one, 1,2-benzisothiazolin-3-one (2634-33-5)</b>	
ATE US (oral)	500.0000000000 mg/kg body weight
<b>1-methyl-2-pyrrolidone (872-50-4)</b>	
LD 50 oral rat	3914 mg/kg (Rat; equivalent or similar to OECD 401; Literature study; 4150 mg/kg bodyweight; Rat; Experimental value)
LD50 dermal rat	7000 mg/kg (Rat; Literature study)
LD50 dermal rabbit	8000 mg/kg (Rabbit; equivalent or similar to OECD 402; >5000 mg/kg bodyweight; Rabbit; Experimental value)
LC50 inhalation rat	<5.1 mg/l/4h (Rat; Experimental value)
ATE US (oral)	3914.0000000000 mg/kg bodyweight
ATE US (dermal)	7000.0000000000 mg/kg bodyweight

Acute toxicity	: Not classified
Skin corrosion/irritation	: Not classified pH: 7 – 8 -- Causes skin irritation
Serious eye damage/irritation	: Not classified pH: 7 – 8 – Causes serious eye irritation
Respiratory or skin sensitization	: Not classified
Germ cell mutagenicity	: Not classified
Carcinogenicity	: Not classified
Reproductive toxicity	: Suspected of damaging fertility or the unborn child
Specific target organ toxicity – single exposure	: Not classified
Specific target organ toxicity – repeated exposure	: Not classified
Aspiration hazard	: Not classified
Potential Adverse human health effects and symptoms	: Based on data, the classification criteria are not met
Symptoms/injuries after skin contact	: Causes skin irritation

**SECTION 12: Ecological information**

**12.1. Toxicity**

<b>1-methyl-2-pyrrolidone (872-50-4)</b>	
LC50 fish 1	3048 mg/l (96h; Salmo gairdneri (Oncorhynchus mykiss); cool water)
EC50 Daphnia 1	4897 mg/l (48h; Daphnia magna)
LC50 fish 2	832 mg/l (96h; Lepomis macrochirus; warm water)
EC50 Daphnia 2	4655 mg/l (Gammarus sp.)
Threshold limit algae 1	> 500 mg/l (Scenedesmus subspicatus)
Threshold limit algae 2	600.5 mg/l (72h; Desmodesmus subspicatus; Growth rate)

**12.2. Persistence and degradability**

<b>Emulsion</b>	
Persistence and degradability	Not established
<b>1-methyl-2-pyrrolidone (872-50-4)</b>	
Persistence and degradability	Readily biodegradable in water. Biodegradable in soil. Photodegradation in air.

Biochemical Oxygen Demand (BOD)	1.07g O2/g substance
Chemical Oxygen Demand (COD)	1.56g O2/g substance
ThOD	1.9g O2/g substance
BOD (% of ThOD)	0.56% ThOD

### 12.3. Bioaccumulative potential

<b>Emulsion</b>	
Bioaccumulative potential	Not established
<b>1-methyl-2-pyrrolidone (872-50-4)</b>	
Log Pow	-0.73 - -0.46 (Experimental value)
Bioaccumulative potential	Not bioaccumulative

### 12.4. Mobility in soil

<b>1-methyl-2-pyrrolidone (872-50-4)</b>	
Surface tension	0.407 N/m

### 12.5. Other adverse effects

Effect on ozone layer	: No additional information available
Effect on global warming	: No known ecological damage caused by this product
Other information	: Avoid release to the environment

## SECTION 13: Disposal considerations

### 13.1. Disposal methods

Waste disposal recommendations	: Dispose in a safe manner in accordance with local/national regulations.
Ecology - waste materials	: Avoid release to the environment.

## SECTION 14: Transport information

In accordance with DOT. Not regulated for transportation.

## SECTION 15: Regulatory information

### 15.1. US Federal regulations

The components of this product are in compliance with the requirements of the Toxic Substances Control Act (TSCA). One of the components of this product is exempt from the TSCA Inventory listing requirements under the provisions of the TSCA Polymer Exemption (PE); 40 CFR §732.250. According to PE rules, the importer of record is required to submit, during January of the year following the first import of an exempted polymer, a onetime notification to EPA of the number of polymer exemptions used for the first time in the previous calendar year.

All components of this product are listed, or excluded from listing, on the US Environmental Protection Agency Toxic Substances Control Act (TSCA) inventory except for 1,2-benzisothiazol-3(2H)-one, 1,2-benzisothiazolin-3-one (CAS No. 2634-33-5).

This product or mixture does not contain a toxic chemical or chemicals in excess of the applicable de minimis concentration as specified in 40 CFR §372.38(a) subject to the reporting requirements of section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR Part 372.

1-methyl-2-pyrrolidone (872-50-4) listed on United States SARA Section 313.

### 15.2. International regulations

#### CANADA

One of the components of this product is listed on the Canadian DSL (Domestic Substance List).

#### EU-Regulations

One of the components of this product is listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances).

**Classification according to Regulation (EC) No. 1272/2008 [CLP]**

**Classification according to Directive 67/548/EEC [DSD] or 1999/45/EC [DPD]**

Not classified

### 15.3. US State regulations

California Proposition 65 - This product contains, or may contain, trace quantities of a substance known to the State of California to cause cancer

and/or reproductive toxicity.

1-methyl-2-pyrrolidone (872-50-4)				
U.S. - California - Proposition 65 - Carcinogens List	U.S. - California - Proposition 65 - Developmental Toxicity	U.S. - California - Proposition 65 - Reproductive Toxicity - Female	U.S. - California - Proposition 65 - Reproductive Toxicity - Male	No significant risk level (NSRL)

**SECTION 16: Other information**

Acute Tox 4 (Dermal)	Acute toxicity (dermal) category 4
Acute Tox 4 (Inhalation)	Acute toxicity (inhalation) category 4
Acute Tox 4 (Oral)	Acute toxicity (oral) category 4
Aquatic Acute 1	Hazardous to the aquatic environment - Acute Hazard Category 1
Eye Dam 1	Serious eye damage/irritation Category 1
Eye Irrit 2A	Serious eye damage/irritation Category 2A
Flam Liq 3	Flammable liquids category 3
Flam Liq 4	Flammable liquids category 4
Repr 2	Reproductive toxicity category 2
Skin Corr 1B	Skin corrosion/irritation Category 1B
Skin Irrit 2	Skin corrosion/irritation Category 2
Skin Sens 1	Skin sensitization category 1
STOT SE 3	Specific target organ toxicity (single exposure) Category 3
H226	Flammable liquid and vapor
H227	Combustible liquid
H302	Harmful if swallowed
H312	Harmful in contact with skin
H314	Causes severe skin burns and eye damage
H315	Causes skin irritation
H317	May cause an allergic skin reaction
H318	Causes serious eye damage
H319	Causes serious eye irritation
H332	Harmful if inhaled
H336	May cause drowsiness or dizziness
H361	Suspected of damaging fertility or the unborn child
H400	Very toxic to aquatic life

*This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only.*

SDS number: OTH-0216