

## Enstrip NP-1

Caswell Part Number NSTRIP1

Chemwatch Hazard Alert Code: 2

Chemwatch: 23-5665

Issue Date: 1/01/2020

Version No: 2.1.1.1

S.GHS.AUS.EN

Safety Data Sheet according to WHS and ADG requirements

### SECTION 1 IDENTIFICATION OF THE SUBSTANCE / MIXTURE AND OF THE COMPANY / UNDERTAKING

#### Product Identifier

Product name	Enstrip NP-1
Synonyms	Not Available
Other means of identification	Not Available

#### Relevant identified uses of the substance or mixture and uses advised against

Relevant identified uses	Use according to manufacturer's directions.
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#### Details of the supplier of the safety data sheet

Manufacturer/ Supplier	Elite Surface Technologies Pty Limited	Retailed By Caswell Australia P/L
Address	305 Frankston Dandenong Rd Dandenong South VIC 3175 Australia	Factory 1, 51 ELM PARK DRIVE, HOPPERS CROSSING VIC, 3029
Telephone	+61 3 9768 3860	03 9741 7103
Fax	+61 3 9768 2896	MOBILE 0427 70 80 90
Website	<a href="https://elitesurfacetech.com.au/">https://elitesurfacetech.com.au/</a>	<a href="http://caswellplating.com.au">caswellplating.com.au</a>
Email	<a href="mailto:elite@elitesurtech.com.au">elite@elitesurtech.com.au</a>	<a href="mailto:sales@caswellplating.com.au">sales@caswellplating.com.au</a>

#### Emergency telephone number

Association / Organisation	Not Available	Caswell Australia P/L
Emergency telephone numbers	+61 418 474 492	03 9741 7103
Other emergency telephone numbers	+61 419 301 019	<b>000</b>

### SECTION 2 HAZARDS IDENTIFICATION

#### Classification of the substance or mixture

**HAZARDOUS CHEMICAL. NON-DANGEROUS GOODS. According to the WHS Regulations and the ADG Code.**

#### CHEMWATCH HAZARD RATINGS

	Min	Max	
Flammability	0		
Toxicity	1		0 = Minimum
Body Contact	2		1 = Low
Reactivity	2		2 = Moderate
Chronic	2		3 = High
			4 = Extreme

Poisons Schedule	S6
Classification <sup>[1]</sup>	Skin Corrosion/Irritation Category 2, Eye Irritation Category 2A, Skin Sensitizer Category 1, Germ cell mutagenicity Category 2, Specific target organ toxicity - single exposure Category 3 (respiratory tract irritation), Specific target organ toxicity - repeated exposure Category 2, Acute Aquatic Hazard Category 2
Legend:	1. Classified by Chemwatch; 2. Classification drawn from HSIS ; 3. Classification drawn from EC Directive 1272/2008 - Annex VI

#### Label elements

Hazard pictogram(s)	
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SIGNAL WORD	<b>WARNING</b>
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**Hazard statement(s)**

<b>H315</b>	Causes skin irritation.
<b>H319</b>	Causes serious eye irritation.
<b>H317</b>	May cause an allergic skin reaction.
<b>H341</b>	Suspected of causing genetic defects.
<b>H335</b>	May cause respiratory irritation.
<b>H373</b>	May cause damage to organs through prolonged or repeated exposure.
<b>H401</b>	Toxic to aquatic life.

**Precautionary statement(s) Prevention**

<b>P201</b>	Obtain special instructions before use.
<b>P260</b>	Do not breathe dust/fume/gas/mist/vapours/spray.
<b>P271</b>	Use only outdoors or in a well-ventilated area.
<b>P280</b>	Wear protective gloves/protective clothing/eye protection/face protection.

**Precautionary statement(s) Response**

<b>P308+P313</b>	IF exposed or concerned: Get medical advice/attention.
<b>P362</b>	Take off contaminated clothing and wash before reuse.
<b>P302+P352</b>	IF ON SKIN: Wash with plenty of soap and water.
<b>P305+P351+P338</b>	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

**Precautionary statement(s) Storage**

<b>P405</b>	Store locked up.
<b>P403+P233</b>	Store in a well-ventilated place. Keep container tightly closed.

**Precautionary statement(s) Disposal**

<b>P501</b>	Dispose of contents/container in accordance with local regulations.
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**SECTION 3 COMPOSITION / INFORMATION ON INGREDIENTS****Substances**

See section below for composition of Mixtures

**Mixtures**

CAS No	%[weight]	Name
121-92-6	10-30	<u>3-nitrobenzoic acid</u>
1336-21-6	1-10	<u>ammonia</u>
	balance	other non hazardous ingredients

**SECTION 4 FIRST AID MEASURES****Description of first aid measures**

<b>Eye Contact</b>	<p>If this product comes in contact with the eyes:</p> <ul style="list-style-type: none"> <li>▶ Wash out immediately with fresh running water.</li> <li>▶ Ensure complete irrigation of the eye by keeping eyelids apart and away from eye and moving the eyelids by occasionally lifting the upper and lower lids.</li> <li>▶ Seek medical attention without delay; if pain persists or recurs seek medical attention.</li> <li>▶ Removal of contact lenses after an eye injury should only be undertaken by skilled personnel.</li> </ul>
<b>Skin Contact</b>	<p>If skin contact occurs:</p> <ul style="list-style-type: none"> <li>▶ Immediately remove all contaminated clothing, including footwear.</li> <li>▶ Flush skin and hair with running water (and soap if available).</li> <li>▶ Seek medical attention in event of irritation.</li> </ul>
<b>Inhalation</b>	<ul style="list-style-type: none"> <li>▶ If fumes or combustion products are inhaled remove from contaminated area.</li> <li>▶ Lay patient down. Keep warm and rested.</li> <li>▶ Prostheses such as false teeth, which may block airway, should be removed, where possible, prior to initiating first aid procedures.</li> <li>▶ Apply artificial respiration if not breathing, preferably with a demand valve resuscitator, bag-valve mask device, or pocket mask as trained. Perform CPR if necessary.</li> <li>▶ Transport to hospital, or doctor, without delay.</li> </ul>
<b>Ingestion</b>	<ul style="list-style-type: none"> <li>▶ <b>If swallowed do NOT induce vomiting.</b></li> <li>▶ If vomiting occurs, lean patient forward or place on left side (head-down position, if possible) to maintain open airway and prevent aspiration.</li> <li>▶ Observe the patient carefully.</li> <li>▶ Never give liquid to a person showing signs of being sleepy or with reduced awareness; i.e. becoming unconscious.</li> <li>▶ Give water to rinse out mouth, then provide liquid slowly and as much as casualty can comfortably drink.</li> <li>▶ Seek medical advice.</li> </ul>

**Indication of any immediate medical attention and special treatment needed**

Symptoms of vasodilation and reflex tachycardia may present following organic nitrate overdose; most organic nitrates are extensively metabolised by hydrolysis to inorganic nitrites. Organic nitrates and nitrites are readily absorbed through the skin, lungs, mucosa and gastro-intestinal tract.

The toxicity of nitrates and nitrites result from their vasodilating properties and their propensity to form methaemoglobin.

- ▶ Most produce a peak effect within 30 minutes.
- ▶ Clinical signs of cyanosis appear before other symptoms because of the dark pigmentation of methaemoglobin.
- ▶ Initial attention should be directed towards improving oxygen delivery, with assisted ventilation, if necessary. Hyperbaric oxygen has not demonstrated conclusive benefits.
- ▶ Institute cardiac monitoring, especially in patients with coronary artery or pulmonary disease.
- ▶ Hypotension should respond to Trendelenburg's position and intravenous fluids; otherwise dopamine may be needed.
- ▶ Naloxone, glucose and thiamine should be given if a multiple ingestion is suspected.
- ▶ Decontaminate using Ipecac Syrup for alert patients or lavage for obtunded patients who present within 2-4 hours of ingestion.
- ▶ Symptomatic patients with methaemoglobin levels over 30% should receive methylene blue. (Cyanosis alone, is not an indication for treatment). The usual dose is 1-2 mg/kg of a 1% solution (10 mg/ml) IV over 5 minutes; repeat, using the same dose if symptoms of hypoxia fail to subside within 1 hour.

[Ellenhorn and Barceloux: Medical Toxicology]

#### BIOLOGICAL EXPOSURE INDEX - BEI

These represent the determinants observed in specimens collected from a healthy worker who has been exposed at the Exposure Standard (ES or TLV):

Determinant	Index	Sampling Time	Comments
1. Methaemoglobin in blood	1.5% of haemoglobin	During or end of shift	B,NS,SQ

B: Background levels occur in specimens collected from subjects **NOT** exposed

NS: Non-specific determinant; also observed after exposure to other materials

SQ: Semi-quantitative determinant - Interpretation may be ambiguous; should be used as a screening test or confirmatory test.

for irritant gas exposures:

- ▶ the presence of the agent when it is inhaled is evanescent (of short duration) and therefore, cannot be washed away or otherwise removed
- ▶ arterial blood gases are of primary importance to aid in determination of the extent of damage. Never discharge a patient significantly exposed to an irritant gas without obtaining an arterial blood sample.
- ▶ supportive measures include suctioning (intubation may be required), volume cycle ventilator support (positive and expiratory pressure (PEEP), steroids and antibiotics, after a culture is taken
- ▶ If the eyes are involved, an ophthalmologic consultation is recommended

Occupational Medicine: Third Edition; Zenz, Dickerson, Horvath 1994 Pub: Mosby

For acute or short term repeated exposures to ammonia and its solutions:

- ▶ Mild to moderate inhalation exposures produce headache, cough, bronchospasm, nausea, vomiting, pharyngeal and retrosternal pain and conjunctivitis. Severe inhalation produces laryngospasm, signs of upper airway obstruction (stridor, hoarseness, difficulty in speaking) and, in excessively, high doses, pulmonary oedema.
- ▶ Warm humidified air may soothe bronchial irritation.
- ▶ Test all patients with conjunctival irritation for corneal abrasion (fluorescein stain, slit lamp exam)
- ▶ Dyspneic patients should receive a chest X-ray and arterial blood gases to detect pulmonary oedema.

## SECTION 5 FIREFIGHTING MEASURES

### Extinguishing media

- ▶ There is no restriction on the type of extinguisher which may be used.
- ▶ Use extinguishing media suitable for surrounding area.

### Special hazards arising from the substrate or mixture

<b>Fire Incompatibility</b>	▶ Avoid contamination with oxidising agents i.e. nitrates, oxidising acids, chlorine bleaches, pool chlorine etc. as ignition may result
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### Advice for firefighters

<b>Fire Fighting</b>	<ul style="list-style-type: none"> <li>▶ Alert Fire Brigade and tell them location and nature of hazard.</li> <li>▶ Wear breathing apparatus plus protective gloves in the event of a fire.</li> <li>▶ Prevent, by any means available, spillage from entering drains or water courses.</li> <li>▶ Use fire fighting procedures suitable for surrounding area.</li> </ul>
<b>Fire/Explosion Hazard</b>	carbon dioxide (CO <sub>2</sub> ) , nitrogen oxides (NO <sub>x</sub> ) , other pyrolysis products typical of burning organic material. May emit poisonous fumes. May emit corrosive fumes. <ul style="list-style-type: none"> <li>▶ Non combustible.</li> <li>▶ Not considered a significant fire risk, however containers may burn.</li> </ul> Decomposition may produce toxic fumes of:
<b>HAZCHEM</b>	Not Applicable

## SECTION 6 ACCIDENTAL RELEASE MEASURES

### Personal precautions, protective equipment and emergency procedures

See section 8

### Environmental precautions

See section 12

### Methods and material for containment and cleaning up

<b>Minor Spills</b>	<ul style="list-style-type: none"> <li>▶ Clean up all spills immediately.</li> <li>▶ Avoid breathing vapours and contact with skin and eyes.</li> <li>▶ Control personal contact with the substance, by using protective equipment.</li> <li>▶ Contain and absorb spill with sand, earth, inert material or vermiculite.</li> </ul>
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<b>Major Spills</b>	<p>Moderate hazard.</p> <ul style="list-style-type: none"> <li>▶ Clear area of personnel and move upwind.</li> <li>▶ Alert Fire Brigade and tell them location and nature of hazard.</li> <li>▶ Wear breathing apparatus plus protective gloves.</li> </ul>
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Personal Protective Equipment advice is contained in Section 8 of the SDS.

## SECTION 7 HANDLING AND STORAGE

### Precautions for safe handling

<b>Safe handling</b>	<ul style="list-style-type: none"> <li>▶ <b>DO NOT allow clothing wet with material to stay in contact with skin</b></li> <li>▶ Avoid all personal contact, including inhalation.</li> <li>▶ Wear protective clothing when risk of exposure occurs.</li> <li>▶ Use in a well-ventilated area.</li> <li>▶ Avoid contact with moisture.</li> </ul>
<b>Other information</b>	<ul style="list-style-type: none"> <li>▶ Store in original containers.</li> <li>▶ Keep containers securely sealed.</li> <li>▶ Store in a cool, dry, well-ventilated area.</li> <li>▶ Store away from incompatible materials and foodstuff containers.</li> </ul>

### Conditions for safe storage, including any incompatibilities

<b>Suitable container</b>	<ul style="list-style-type: none"> <li>▶ Polyethylene or polypropylene container.</li> <li>▶ Packing as recommended by manufacturer.</li> <li>▶ Check all containers are clearly labelled and free from leaks.</li> </ul>
<b>Storage incompatibility</b>	<ul style="list-style-type: none"> <li>▶ Nitroaromatic and in particular polynitroaromatic compounds may present a severe explosion risk if subjected to shock or heated rapidly and uncontrollably as in fire situations.</li> <li>▶ In addition, when such compounds are heated more moderately with caustic alkalis, even when water or organic solvents are present, there is also a risk of violent decomposition or explosion - several industrial accidents, which probably were due to such interactions, have occurred; this potential hazard often remains unacknowledged.</li> <li>▶ Aromatic nitro compounds range from slight to strong oxidizing agents. If mixed with reducing agents, including hydrides, sulfides and nitrides, they may begin a vigorous reaction that culminates in a detonation.</li> </ul> <p>For ammonia:</p> <ul style="list-style-type: none"> <li>▶ Ammonia forms explosive mixtures with oxygen, chlorine, bromine, fluorine, iodine, mercury, platinum and silver.</li> <li>▶ Fire and/or explosion may follow contact with acetaldehyde, acrolein, aldehydes, alkyls, alkenes, aldehydes, amides, antimony, boron, boron halides, bromine chloride, chloric acid, chlorine monoxide, o-chloronitrobenzene, 1-chloro-2,4-nitrobenzene, chlorosilane, chloromelamine, chromium trioxide, chromyl chloride, epichlorohydrin, hexachloromelamine, hypochlorites (do NOT mix ammonia with liquid household bleach), isocyanates, nitrogen tetroxide, nitrogen trichloride, nitril chloride, organic anhydrides, phosphorous trioxide, potassium ferricyanide, potassium mercuric cyanide, silver chloride, stibine, tellurium halides, tellurium hydropentachloride, tetramethylammonium amide, trimethylammonium amide, trioxigen difluoride, vinyl acetate.</li> <li>▶ Shock-, temperature-, and pressure sensitive compounds are formed with antimony, chlorine, germanium compounds, halogens, heavy metals, hydrocarbons, mercury oxide, silver compounds (azides, chlorides, nitrates, oxides).</li> <li>▶ Vapours or solutions of ammonia are corrosive to copper, copper alloys, galvanised metal and aluminium.</li> <li>▶ Avoid reaction with oxidising agents, bases and strong reducing agents.</li> </ul>

## SECTION 8 EXPOSURE CONTROLS / PERSONAL PROTECTION

### Control parameters

#### OCCUPATIONAL EXPOSURE LIMITS (OEL)

#### INGREDIENT DATA


Source	Ingredient	Material name	TWA	STEL	Peak	Notes
Australia Exposure Standards	ammonia	Ammonia	17 mg/m <sup>3</sup> / 25 ppm	24 mg/m <sup>3</sup> / 35 ppm	Not Available	Not Available

#### EMERGENCY LIMITS

Ingredient	Material name	TEEL-1	TEEL-2	TEEL-3
ammonia	Ammonium hydroxide	61 ppm	330 ppm	2,300 ppm
ammonia	Ammonia	Not Available	Not Available	Not Available

Ingredient	Original IDLH	Revised IDLH
3-nitrobenzoic acid	Not Available	Not Available
ammonia	300 ppm	Not Available

### Exposure controls

<b>Appropriate engineering controls</b>	<p>CARE: Explosive vapour air mixtures may be present on opening vessels which have contained liquid ammonia. Fatalities have occurred</p> <p>Engineering controls are used to remove a hazard or place a barrier between the worker and the hazard. Well-designed engineering controls can be highly effective in protecting workers and will typically be independent of worker interactions to provide this high level of protection.</p> <p>The basic types of engineering controls are:</p> <p>Process controls which involve changing the way a job activity or process is done to reduce the risk.</p> <p>Enclosure and/or isolation of emission source which keeps a selected hazard "physically" away from the worker and ventilation that strategically "adds" and "removes" air in the work environment.</p>
<b>Personal protection</b>	

<b>Eye and face protection</b>	<ul style="list-style-type: none"> <li>▶ Safety glasses with side shields.</li> <li>▶ Chemical goggles.</li> <li>▶ Contact lenses may pose a special hazard; soft contact lenses may absorb and concentrate irritants. A written policy document, describing the wearing of lenses or restrictions on use, should be created for each workplace or task.</li> </ul>
<b>Skin protection</b>	See Hand protection below
<b>Hands/feet protection</b>	<ul style="list-style-type: none"> <li>▶ Wear chemical protective gloves, e.g. PVC.</li> <li>▶ Wear safety footwear or safety gumboots, e.g. Rubber</li> </ul> <p><b>NOTE:</b></p> <ul style="list-style-type: none"> <li>▶ The material may produce skin sensitisation in predisposed individuals. Care must be taken, when removing gloves and other protective equipment, to avoid all possible skin contact.</li> <li>▶ Contaminated leather items, such as shoes, belts and watch-bands should be removed and destroyed.</li> </ul> <p>The selection of suitable gloves does not only depend on the material, but also on further marks of quality which vary from manufacturer to manufacturer. Where the chemical is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.</p> <p>The exact break through time for substances has to be obtained from the manufacturer of the protective gloves and has to be observed when making a final choice.</p> <p>Personal hygiene is a key element of effective hand care.</p>
<b>Body protection</b>	See Other protection below
<b>Other protection</b>	<ul style="list-style-type: none"> <li>▶ Overalls.</li> <li>▶ P.V.C. apron.</li> <li>▶ Barrier cream.</li> </ul>
<b>Thermal hazards</b>	Not Available

### Recommended material(s)

#### GLOVE SELECTION INDEX

Glove selection is based on a modified presentation of the:

"Forsberg Clothing Performance Index".

The effect(s) of the following substance(s) are taken into account in the **computer-generated** selection:

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Material	CPI
BUTYL	C
HYPALON	C
NATURAL RUBBER	C
NATURAL+NEOPRENE	C
NEOPRENE	C
NEOPRENE/NATURAL	C
NITRILE	C
NITRILE+PVC	C
PVC	C

\* CPI - Chemwatch Performance Index

A: Best Selection

B: Satisfactory; may degrade after 4 hours continuous immersion

C: Poor to Dangerous Choice for other than short term immersion

**NOTE:** As a series of factors will influence the actual performance of the glove, a final selection must be based on detailed observation. -

\* Where the glove is to be used on a short term, casual or infrequent basis, factors such as "feel" or convenience (e.g. disposability), may dictate a choice of gloves which might otherwise be unsuitable following long-term or frequent use. A qualified practitioner should be consulted.

### Respiratory protection

Type K Filter of sufficient capacity. (AS/NZS 1716 & 1715, EN 143:2000 & 149:2001, ANSI Z88 or national equivalent)

Where the concentration of gas/particulates in the breathing zone, approaches or exceeds the "Exposure Standard" (or ES), respiratory protection is required.

Degree of protection varies with both face-piece and Class of filter; the nature of protection varies with Type of filter.

Required Minimum Protection Factor	Half-Face Respirator	Full-Face Respirator	Powered Air Respirator
up to 5 x ES	K-AUS / Class 1	-	K-PAPR-AUS / Class 1
up to 25 x ES	Air-line*	K-2	K-PAPR-2
up to 50 x ES	-	K-3	-
50+ x ES	-	Air-line**	-

^ - Full-face

A(All classes) = Organic vapours, B AUS or B1 = Acid gasses, B2 = Acid gas or hydrogen cyanide(HCN), B3 = Acid gas or hydrogen cyanide(HCN), E = Sulfur dioxide(SO<sub>2</sub>), G = Agricultural chemicals, K = Ammonia(NH<sub>3</sub>), Hg = Mercury, NO = Oxides of nitrogen, MB = Methyl bromide, AX = Low boiling point organic compounds(below 65 degC)

Cartridge respirators should never be used for emergency ingress or in areas of unknown vapour concentrations or oxygen content. The wearer must be warned to leave the contaminated area immediately on detecting any odours through the respirator. The odour may indicate that the mask is not functioning properly, that the vapour concentration is too high, or that the mask is not properly fitted. Because of these limitations, only restricted use of cartridge respirators is considered appropriate.

## SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

### Information on basic physical and chemical properties

<b>Appearance</b>	Light yellow slightly alkaline liquid.		
<b>Physical state</b>	Liquid	<b>Relative density (Water = 1)</b>	1.052-1.080
<b>Odour</b>	Not Available	<b>Partition coefficient n-octanol / water</b>	Not Available
<b>Odour threshold</b>	Not Available	<b>Auto-ignition temperature (°C)</b>	Not Applicable
<b>pH (as supplied)</b>	8.5-9.9	<b>Decomposition temperature</b>	Not Available
<b>Melting point / freezing point (°C)</b>	Not Available	<b>Viscosity (cSt)</b>	Not Available
<b>Initial boiling point and boiling range (°C)</b>	Not Available	<b>Molecular weight (g/mol)</b>	Not Applicable
<b>Flash point (°C)</b>	Not Applicable	<b>Taste</b>	Not Available
<b>Evaporation rate</b>	Not Available	<b>Explosive properties</b>	Not Available
<b>Flammability</b>	Not Applicable	<b>Oxidising properties</b>	Not Available
<b>Upper Explosive Limit (%)</b>	Not Applicable	<b>Surface Tension (dyn/cm or mN/m)</b>	Not Available
<b>Lower Explosive Limit (%)</b>	Not Applicable	<b>Volatile Component (%vol)</b>	Not Available

Vapour pressure (kPa)	Not Available	Gas group	Not Available
Solubility in water (g/L)	Not Available	pH as a solution (1%)	Not Available
Vapour density (Air = 1)	Not Available	VOC g/L	Not Available

## SECTION 10 STABILITY AND REACTIVITY

Reactivity	See section 7
Chemical stability	<ul style="list-style-type: none"> <li>▶ Unstable in the presence of incompatible materials.</li> <li>▶ Product is considered stable.</li> <li>▶ Hazardous polymerisation will not occur.</li> </ul>
Possibility of hazardous reactions	See section 7
Conditions to avoid	See section 7
Incompatible materials	See section 7
Hazardous decomposition products	See section 5

## SECTION 11 TOXICOLOGICAL INFORMATION

### Information on toxicological effects

Inhaled	<p>The material can cause respiratory irritation in some persons. The body's response to such irritation can cause further lung damage. The highly irritant properties of ammonia vapour result as the gas dissolves in mucous fluids and forms irritant, even corrosive solutions. Inhalation of the ammonia fumes causes coughing, vomiting, reddening of lips, mouth, nose, throat and conjunctiva while higher concentrations can cause temporary blindness, restlessness, tightness in the chest, pulmonary oedema (lung damage), weak pulse and cyanosis. Inhalation of high concentrations of vapour may cause breathing difficulty, tightness in chest, pulmonary oedema and lung damage. Brief exposure to high concentrations &gt; 5000 ppm may cause death due to asphyxiation (suffocation) or fluid in the lungs.</p>
Ingestion	<p>Accidental ingestion of the material may be damaging to the health of the individual. The substance and/or its metabolites may bind to haemoglobin inhibiting normal uptake of oxygen. This condition, known as "methaemoglobinemia", is a form of oxygen starvation (anoxia). Symptoms include cyanosis (a bluish discolouration skin and mucous membranes) and breathing difficulties. Symptoms may not be evident until several hours after exposure. Large doses of ammonia or injected ammonium salts may produce diarrhoea and may be sufficiently absorbed to produce increased production of urine and systemic poisoning. Symptoms include weakening of facial muscle, tremor, anxiety, reduced muscle and limb control.</p>
Skin Contact	<p>This material can cause inflammation of the skin on contact in some persons. The material may accentuate any pre-existing dermatitis condition. Mild skin reaction is seen with contact of the vapour of this material on moist skin. High concentrations or direct contact with solutions produces severe pain, a stinging sensation, burns and blisters and possible brown stains. Death could result from extensive burning. Vapour exposure may rarely, produce an itchy rash. Entry into the blood-stream, through, for example, cuts, abrasions or lesions, may produce systemic injury with harmful effects. Examine the skin prior to the use of the material and ensure that any external damage is suitably protected.</p>
Eye	<p>This material can cause eye irritation and damage in some persons.</p>
Chronic	<p>Repeated or long-term occupational exposure is likely to produce cumulative health effects involving organs or biochemical systems. Long-term exposure to respiratory irritants may result in airways disease, involving difficulty breathing and related whole-body problems. Strong evidence exists that this substance may cause irreversible mutations (though not lethal) even following a single exposure. Skin contact with the material is more likely to cause a sensitisation reaction in some persons compared to the general population. Laboratory (in vitro) and animal studies show, exposure to the material may result in a possible risk of irreversible effects, with the possibility of producing mutation. Prolonged or repeated minor exposure to ammonia gas/vapour may cause long-term irritation to the eyes, nose and upper airway. Repeated exposure or prolonged contact may produce skin inflammation and conjunctivitis. Other effects may include ulcers in the mouth and disturbances to the bronchi and gastrointestinal tract. In animals, repeated exposure to sublethal levels produces adverse effects on the airways, liver, kidneys and spleen, as well as eye irritation and clouding of the cornea.</p>

Enstrip NP-1	TOXICITY	IRRITATION
	Not Available	Not Available
3-nitrobenzoic acid	TOXICITY	IRRITATION
	Not Available	Not Available
ammonia	TOXICITY	IRRITATION
	Inhalation (rat) LC50: 1997.718 mg/l/4h <sup>[2]</sup>	Eye (rabbit): 0.25 mg SEVERE
	Oral (rat) LD50: 350 mg/kg <sup>[2]</sup>	Eye (rabbit): 1 mg/30s SEVERE

**Legend:** 1. Value obtained from Europe ECHA Registered Substances - Acute toxicity 2.\* Value obtained from manufacturer's SDS. Unless otherwise specified data extracted from RTECS - Register of Toxic Effect of chemical Substances

3-NITROBENZOIC ACID	Lacrimation, somnolence, convulsions, excitement, aggression recorded.
AMMONIA	No significant acute toxicological data identified in literature search. The material may produce severe irritation to the eye causing pronounced inflammation. Repeated or prolonged exposure to irritants may produce conjunctivitis.
Enstrip NP-1 & 3-NITROBENZOIC ACID	The following information refers to contact allergens as a group and may not be specific to this product. Contact allergies quickly manifest themselves as contact eczema, more rarely as urticaria or Quincke's oedema. The pathogenesis of contact eczema involves a cell-mediated (T lymphocytes) immune reaction of the delayed type. Other allergic skin reactions, e.g. contact urticaria, involve antibody-mediated

	immune reactions.		
<b>Enstrip NP-1 &amp; 3-NITROBENZOIC ACID &amp; AMMONIA</b>	Asthma-like symptoms may continue for months or even years after exposure to the material ends. This may be due to a non-allergic condition known as reactive airways dysfunction syndrome (RADS) which can occur after exposure to high levels of highly irritating compound. Main criteria for diagnosing RADS include the absence of previous airways disease in a non-atopic individual, with sudden onset of persistent asthma-like symptoms within minutes to hours of a documented exposure to the irritant. Other criteria for diagnosis of RADS include a reversible airflow pattern on lung function tests, moderate to severe bronchial hyperreactivity on methacholine challenge testing, and the lack of minimal lymphocytic inflammation, without eosinophilia.		
<b>Acute Toxicity</b>	☹	<b>Carcinogenicity</b>	☹
<b>Skin Irritation/Corrosion</b>	✔	<b>Reproductivity</b>	☹
<b>Serious Eye Damage/Irritation</b>	✔	<b>STOT - Single Exposure</b>	✔
<b>Respiratory or Skin sensitisation</b>	✔	<b>STOT - Repeated Exposure</b>	✔
<b>Mutagenicity</b>	✔	<b>Aspiration Hazard</b>	☹

**Legend:** ✘ – Data available but does not fill the criteria for classification  
✔ – Data available to make classification  
☹ – Data Not Available to make classification

## SECTION 12 ECOLOGICAL INFORMATION

### Toxicity

	ENDPOINT	TEST DURATION (HR)	SPECIES	VALUE	SOURCE
	<b>Enstrip NP-1</b>	Not Available	Not Available	Not Available	Not Available
<b>3-nitrobenzoic acid</b>	Not Available	Not Available	Not Available	Not Available	Not Available
<b>ammonia</b>	LC50	96	Fish	15mg/L	4
	NOEC	72	Fish	3.5mg/L	4

**Legend:** *Extracted from 1. IUCLID Toxicity Data 2. Europe ECHA Registered Substances - Ecotoxicological Information - Aquatic Toxicity 3. EPIWIN Suite V3.12 (QSAR) - Aquatic Toxicity Data (Estimated) 4. US EPA, Ecotox database - Aquatic Toxicity Data 5. ECETOC Aquatic Hazard Assessment Data 6. NITE (Japan) - Bioconcentration Data 7. METI (Japan) - Bioconcentration Data 8. Vendor Data*

Toxic to aquatic organisms.

**DO NOT** discharge into sewer or waterways.

### Persistence and degradability

Ingredient	Persistence: Water/Soil	Persistence: Air
3-nitrobenzoic acid	HIGH	HIGH
ammonia	LOW	LOW

### Bioaccumulative potential

Ingredient	Bioaccumulation
3-nitrobenzoic acid	LOW (BCF = 7.1)
ammonia	LOW (LogKOW = 0.229)

### Mobility in soil

Ingredient	Mobility
3-nitrobenzoic acid	LOW (KOC = 16.71)
ammonia	LOW (KOC = 14.3)

## SECTION 13 DISPOSAL CONSIDERATIONS

### Waste treatment methods

<b>Product / Packaging disposal</b>	<ul style="list-style-type: none"> <li>▶ Containers may still present a chemical hazard/ danger when empty.</li> <li>▶ Return to supplier for reuse/ recycling if possible.</li> </ul> <p>Otherwise:</p> <ul style="list-style-type: none"> <li>▶ If container can not be cleaned sufficiently well to ensure that residuals do not remain or if the container cannot be used to store the same product, then puncture containers, to prevent re-use, and bury at an authorised landfill.</li> <li>▶ Where possible retain label warnings and SDS and observe all notices pertaining to the product.</li> </ul> <p>Legislation addressing waste disposal requirements may differ by country, state and/ or territory. Each user must refer to laws operating in their area. In some areas, certain wastes must be tracked.</p> <p>A Hierarchy of Controls seems to be common - the user should investigate:</p> <ul style="list-style-type: none"> <li>▶ Reduction</li> <li>▶ Reuse</li> </ul>
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- ▶ Recycling
  - ▶ Disposal (if all else fails)
- This material may be recycled if unused, or if it has not been contaminated so as to make it unsuitable for its intended use.
- ▶ **DO NOT allow wash water from cleaning or process equipment to enter drains.**
  - ▶ It may be necessary to collect all wash water for treatment before disposal.
  - ▶ In all cases disposal to sewer may be subject to local laws and regulations and these should be considered first.
  - ▶ Where in doubt contact the responsible authority.
  - ▶ Recycle wherever possible.
  - ▶ Consult manufacturer for recycling options or consult local or regional waste management authority for disposal if no suitable treatment or disposal facility can be identified.
  - ▶ Dispose of by: burial in a land-fill specifically licensed to accept chemical and / or pharmaceutical wastes or incineration in a licensed apparatus (after admixture with suitable combustible material).
  - ▶ Decontaminate empty containers.

## SECTION 14 TRANSPORT INFORMATION

### Labels Required

Marine Pollutant	NO
HAZCHEM	Not Applicable

Land transport (ADG): NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS

Air transport (ICAO-IATA / DGR): NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS

Sea transport (IMDG-Code / GGVSee): NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS

Transport in bulk according to Annex II of MARPOL and the IBC code

Not Applicable

## SECTION 15 REGULATORY INFORMATION

Safety, health and environmental regulations / legislation specific for the substance or mixture

**3-NITROBENZOIC ACID(121-92-6) IS FOUND ON THE FOLLOWING REGULATORY LISTS**

Australia Inventory of Chemical Substances (AICS)

**AMMONIA(1336-21-6) IS FOUND ON THE FOLLOWING REGULATORY LISTS**

Australia Exposure Standards

Australia Inventory of Chemical Substances (AICS)

Australia Hazardous Substances Information System - Consolidated Lists

National Inventory	Status
Australia - AICS	Y
Canada - DSL	Y
Canada - NDSL	N (ammonia; 3-nitrobenzoic acid)
China - IECSC	Y
Europe - EINEC / ELINCS / NLP	Y
Japan - ENCS	Y
Korea - KECI	N (3-nitrobenzoic acid)
New Zealand - NZIoC	Y
Philippines - PICCS	N (3-nitrobenzoic acid)
USA - TSCA	Y
<b>Legend:</b>	Y = All ingredients are on the inventory N = Not determined or one or more ingredients are not on the inventory and are not exempt from listing(see specific ingredients in brackets)

## SECTION 16 OTHER INFORMATION

### Other information

#### Ingredients with multiple cas numbers

Name	CAS No
ammonia	1336-21-6, 14798-03-9

Classification of the preparation and its individual components has drawn on official and authoritative sources as well as independent review by the Chemwatch Classification committee using available literature references.

The SDS is a Hazard Communication tool and should be used to assist in the Risk Assessment. Many factors determine whether the reported Hazards are Risks in the workplace or other settings. Risks may be determined by reference to Exposures Scenarios. Scale of use, frequency of use and current or available engineering controls must be considered.

### Definitions and abbreviations

PC – TWA: Permissible Concentration-Time Weighted Average PC  
 – STEL: Permissible Concentration-Short Term Exposure Limit  
 IARC: International Agency for Research on Cancer  
 ACGIH: American Conference of Governmental Industrial Hygienists  
 STEL: Short Term Exposure Limit



TEEL: Temporary Emergency Exposure Limit,  
IDLH: Immediately Dangerous to Life or Health Concentrations  
OSF: Odour Safety Factor  
NOAEL :No Observed Adverse Effect Level  
LOAEL: Lowest Observed Adverse Effect Level  
TLV: Threshold Limit Value  
LOD: Limit Of Detection  
OTV: Odour Threshold Value  
BCF: BioConcentration Factors  
BEI: Biological Exposure Index