

SAFETY DATA SHEET

SEPTONE RUST CONVERTER

Infosafe No.: K1H1W
ISSUED Date : 21/01/2014
ISSUED by: SEPTONE PRODUCTS PTY LTD

1. IDENTIFICATION

GHS Product Identifier

SEPTONE RUST CONVERTER

Product Code

AUR250, AUR500, AUR1, AUR4

Company Name

SEPTONE PRODUCTS PTY LTD (ABN 50 009 745 537)

Address

44 Aquarium Avenue HEMMANT
QLD 4174

Telephone/Fax Number

Tel: (07) 3390 5044

Fax: (07) 3390 5041

Emergency phone number

After hours only: (07) 3821 0623

E-mail Address

general@septone.com.au

Recommended use of the chemical and restrictions on use

Rust converter.

Additional Information

Chemical Name: Not Applicable

2. HAZARD IDENTIFICATION

GHS classification of the substance/mixture

HAZARDOUS CHEMICAL. DANGEROUS GOODS. According to the Model WHS Regulations and the ADG Code.

GHS Classification[1]: Metal Corrosion Category 1, Acute Toxicity (Oral) Category 4, Skin Corrosion/Irritation Category 1B, Serious Eye Damage Category 1, Chronic Aquatic Hazard Category 4

Legend: 2. Classification drawn from HSIS ; 3. Classification drawn from EC Regolamentoo 1272/2008 - Annex VI

Signal Word (s)

DANGER

Hazard Statement (s)

H290 May be corrosive to metals

H302 Harmful if swallowed

H314 Causes severe skin burns and eye damage

H318 Causes serious eye damage

H413 May cause long lasting harmful effects to aquatic life

Pictogram (s)

Corrosion, Exclamation mark

**Precautionary statement – Prevention**

P260 Do not breathe dust/fume/gas/mist/vapours/spray.

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

P234 Keep only in original container.

P270 Do not eat, drink or smoke when using this product.

P273 Avoid release to the environment.

Precautionary statement – Response

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

P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.

P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P310 Immediately call a POISON CENTER/doctor/physician/first aider

P321 Specific treatment (see advice on this label).

P363 Wash contaminated clothing before reuse.

P390 Absorb spillage to prevent material damage.

P301+P312 IF SWALLOWED: Call a POISON CENTER/doctor/physician/first aider/if you feel unwell.

P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.

Precautionary statement – Storage

P405 Store locked up.

Precautionary statement – Disposal

P501 Dispose of contents/container to authorised chemical landfill or if organic to high temperature incineration

3. COMPOSITION/INFORMATION ON INGREDIENTS

Information on Composition

Synonyms: Product Codes: AUR250, AUR500, AUR1, AUR4

CAS number: Not Applicable

Substances:

See section below for composition of Mixtures

Ingredients

Name	CAS	Proportion
Phosphoric acid	7664-38-2	30-60 %
Water	7732-18-5	30-60 %

4. FIRST-AID MEASURES

Inhalation

If fumes or combustion products are inhaled remove from contaminated area.

Lay patient down. Keep warm and rested.

Prostheses such as false teeth, which may block airway, should be removed, where possible, prior to initiating first aid procedures.

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.

Transport to hospital, or doctor, without delay.

Inhalation of vapours or aerosols (mists, fumes) may cause lung oedema.

Corrosive substances may cause lung damage (e.g. lung oedema, fluid in the lungs).

As this reaction may be delayed up to 24 hours after exposure, affected individuals need complete rest (preferably in semi-recumbent posture) and must be kept under medical observation even if no symptoms are (yet) manifested.

Before any such manifestation, the administration of a spray containing a dexamethasone derivative or beclomethasone derivative may be considered.

This must definitely be left to a doctor or person authorised by him/her.

(ICSC13719)

Ingestion

For advice, contact a Poisons Information Centre or a doctor at once.

Urgent hospital treatment is likely to be needed.

If swallowed do NOT induce vomiting.

If vomiting occurs, lean patient forward or place on left side (head-down position, if possible) to maintain open airway and prevent aspiration.

Observe the patient carefully.

Never give liquid to a person showing signs of being sleepy or with reduced awareness; i.e. becoming unconscious.

Give water to rinse out mouth, then provide liquid slowly and as much as casualty can comfortably drink.

Transport to hospital or doctor without delay.

Skin

If skin or hair contact occurs:

Immediately flush body and clothes with large amounts of water, using safety shower if available.

Quickly remove all contaminated clothing, including footwear.

Wash skin and hair with running water. Continue flushing with water until advised to stop by the Poisons Information Centre.

Transport to hospital, or doctor.

Eye contact

If this product comes in contact with the eyes:

Immediately hold eyelids apart and flush the eye continuously with running water.

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.

Continue flushing until advised to stop by the Poisons Information Centre or a doctor, or for at least 15 minutes.

Transport to hospital or doctor without delay.

Removal of contact lenses after an eye injury should only be undertaken by skilled personnel.

Indication of immediate medical attention and special treatment needed if necessary

Treat symptomatically.

For acute or short term repeated exposures to strong acids:

Airway problems may arise from laryngeal edema and inhalation exposure. Treat with 100% oxygen initially.

Respiratory distress may require cricothyroidotomy if endotracheal intubation is contraindicated by excessive swelling. Intravenous lines should be established immediately in all cases where there is evidence of circulatory compromise.

Strong acids produce a coagulation necrosis characterised by formation of a coagulum (eschar) as a result of the desiccating action of the acid on proteins in specific tissues.

INGESTION:

Immediate dilution (milk or water) within 30 minutes post ingestion is recommended.

DO NOT attempt to neutralise the acid since exothermic reaction may extend the corrosive injury.

Be careful to avoid further vomit since re-exposure of the mucosa to the acid is harmful. Limit fluids to one or two glasses in an adult.

Charcoal has no place in acid management.

Some authors suggest the use of lavage within 1 hour of ingestion.

SKIN:

Skin lesions require copious saline irrigation. Treat chemical burns as thermal burns with non-adherent gauze and wrapping. Deep second-degree burns may benefit from topical silver sulfadiazine.

EYE:

Eye injuries require retraction of the eyelids to ensure thorough irrigation of the conjunctival cul-de-sacs. Irrigation should last at least 20-30 minutes. DO NOT use neutralising agents or any other additives. Several litres of saline are required.

Cycloplegic drops, (1% cyclopentolate for short-term use or 5% homatropine for longer term use) antibiotic drops, vasoconstrictive agents or artificial tears may be indicated dependent on the severity of the injury.

Steroid eye drops should only be administered with the approval of a consulting ophthalmologist).

[Ellenhorn and Barceloux: Medical Toxicology]

5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media

Water spray or fog.

Foam.

Dry chemical powder.

BCF (where regulations permit).

Carbon dioxide.

Specific Methods

Alert Fire Brigade and tell them location and nature of hazard.

Wear full body protective clothing with breathing apparatus.

Prevent, by any means available, spillage from entering drains or water course.

Use fire fighting procedures suitable for surrounding area.

Do not approach containers suspected to be hot.

Cool fire exposed containers with water spray from a protected location.

If safe to do so, remove containers from path of fire.

Equipment should be thoroughly decontaminated after use.

Specific Hazards Arising From The Chemical

Fire Incompatibility: None known.

Non combustible.

Not considered to be a significant fire risk.

Acids may react with metals to produce hydrogen, a highly flammable and explosive gas.

Heating may cause expansion or decomposition leading to violent rupture of containers.

May emit corrosive, poisonous fumes. May emit acrid smoke.

Decomposition may produce toxic fumes of:

,
Phosphorus oxides (PO_x)

Hazchem Code

2R; 2X

Decomposition Temperature

Not Available

6. ACCIDENTAL RELEASE MEASURES

Clean-up Methods - Small Spillages

Environmental hazard - contain spillage.

Drains for storage or use areas should have retention basins for pH adjustments and dilution of spills before discharge or disposal of material.

Check regularly for spills and leaks.

Clean up all spills immediately.

Avoid breathing vapours and contact with skin and eyes.

Control personal contact with the substance, by using protective equipment.

Contain and absorb spill with sand, earth, inert material or vermiculite.

Wipe up.

Place in a suitable, labelled container for waste disposal.

Slippery when spilt.

Clean-up Methods - Large Spillages

Environmental hazard - contain spillage.

Clear area of personnel and move upwind.

Alert Fire Brigade and tell them location and nature of hazard.

Wear full body protective clothing with breathing apparatus.

Prevent, by any means available, spillage from entering drains or water course.

Stop leak if safe to do so.

Contain spill with sand, earth or vermiculite.

Collect recoverable product into labelled containers for recycling.

Neutralise/decontaminate residue (see Section 13 for specific agent).

Collect solid residues and seal in labelled drums for disposal.

Wash area and prevent runoff into drains.

After clean up operations, decontaminate and launder all protective clothing and equipment before storing and re-using.

If contamination of drains or waterways occurs, advise emergency services.

Slippery when spilt.

Other Information

Personal Protective Equipment advice is contained in Section 8 (EXPOSURE CONTROLS/PERSONAL PROTECTION) of the MSDS.

7. HANDLING AND STORAGE

Precautions for Safe Handling

DO NOT allow clothing wet with material to stay in contact with skin

Avoid all personal contact, including inhalation.

Wear protective clothing when risk of exposure occurs.

Use in a well-ventilated area.

WARNING: To avoid violent reaction, ALWAYS add material to water and NEVER water to material.

Avoid smoking, naked lights or ignition sources.

Avoid contact with incompatible materials.

When handling, DO NOT eat, drink or smoke.

Keep containers securely sealed when not in use.

Avoid physical damage to containers.

Always wash hands with soap and water after handling.

Work clothes should be laundered separately. Launder contaminated clothing before re-use.

Use good occupational work practice.

Observe manufacturer's storage and handling recommendations contained within this MSDS.

Atmosphere should be regularly checked against established exposure standards to ensure safe working conditions are maintained.

Other information: Store in original containers.

Keep containers securely sealed.

Store in a cool, dry, well-ventilated area.

Store away from incompatible materials and foodstuff containers.

Protect containers against physical damage and check regularly for leaks.

Observe manufacturer's storage and handling recommendations contained within this MSDS.

Conditions for safe storage, including any incompatibilities

Suitable container:

DO NOT use aluminium or galvanised containers

Check regularly for spills and leaks

Lined metal can, lined metal pail/ can.

Plastic pail.

Polyliner drum.

Packing as recommended by manufacturer.

Check all containers are clearly labelled and free from leaks.

Storage incompatibility: Segregate from alkalis, oxidising agents and chemicals readily decomposed by acids, i.e. cyanides, sulfides, carbonates.

Reacts with mild steel, galvanised steel / zinc producing hydrogen gas which may form an explosive mixture with air.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Occupational exposure limit values

INGREDIENT DATA

Source	Ingredient	Material name	TWA	STEL	Peak	Notes
Australia	phosphoric acid	Phosphoric acid	1 (mg/m ³)	3 (mg/m ³)	Not Available	Not Available

EMERGENCY LIMITS

Ingredient	TEEL-0	TEEL-1	TEEL-2	TEEL-3
phosphoric acid	1(ppm)	3(ppm)	500(ppm)	500(ppm)
water	500(ppm)	500(ppm)	500(ppm)	500(ppm)

Ingredient	Original IDLH	Revised IDLH
phosphoric acid	10,000(mgm ³)	1,000(mgm ³)

Appropriate Engineering Controls

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.

The basic types of engineering controls are:

Process controls which involve changing the way a job activity or process is done to reduce the risk.

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. Ventilation can remove or dilute an air contaminant if designed properly. The design of a ventilation system must match the particular process and chemical or contaminant in use.

Employers may need to use multiple types of controls to prevent employee overexposure.

Local exhaust ventilation usually required. If risk of overexposure exists, wear approved respirator. Correct fit is essential to obtain adequate protection. Supplied-air type respirator may be required in special circumstances. Correct fit is essential to ensure adequate protection.

An approved self contained breathing apparatus (SCBA) may be required in some situations.

Provide adequate ventilation in warehouse or closed storage area. Air contaminants generated in the workplace possess varying 'escape' velocities which, in turn, determine the 'capture velocities' of fresh circulating air required to effectively remove the contaminant.

Type of Contaminant:	Air Speed:
solvent, vapours, degreasing etc., evaporating from tank (in still air).	0.25-0.5 m/s (50-100 f/min.)
aerosols, fumes from pouring operations, intermittent container filling, low speed conveyer transfers, welding, spray drift, plating acid fumes, pickling (released at low velocity into zone of active generation)	0.5-1 m/s (100-200 f/min.)

direct spray, spray painting in shallow booths, drum filling, conveyer loading, crusher dusts, gas discharge (active generation into zone of rapid air motion) 1-2.5 m/s (200-500 f/min.)
 grinding, abrasive blasting, tumbling, high speed wheel generated dusts (released at high initial velocity into zone of very high rapid air motion). 2.5-10 m/s (500-2000 f/min.)

Within each range the appropriate value depends on:

- | | |
|---|----------------------------------|
| Lower end of the range | Upper end of the range |
| 1: Room air currents minimal or favourable to capture | 1: Disturbing room air currents |
| 2: Contaminants of low toxicity or nuisance value only. | 2: Contaminants of high toxicity |
| 3: Intermittent, low production. | 3: High production, heavy use |
| 4: Large hood or large air mass in motion | 4: Small hood-local control only |

Simple theory shows that air velocity falls rapidly with distance away from the opening of a simple extraction pipe. Velocity generally decreases with the square of distance from the extraction point (in simple cases). Therefore the air speed at the extraction point should be adjusted, accordingly, after reference to distance from the contaminating source. The air velocity at the extraction fan, for example, should be a minimum of 1-2 m/s (200-400 f/min) for extraction of solvents generated in a tank 2 meters distant from the extraction point. Other mechanical considerations, producing performance deficits within the extraction apparatus, make it essential that theoretical air velocities are multiplied by factors of 10 or more when extraction systems are installed or used.

Respiratory Protection

Type B-P 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 10 x ES	B-AUS P2	-	B-PAPR-AUS / Class 1 P2
up to 50 x ES	-	B-AUS / Class 1 P2	-
up to 100 x ES	-	B-2 P2	B-PAPR-2 P2 ^

^ - Full-face

A(All classes) = Organic vapours, B AUS or B1 = Acid gasses, B2 = Acid gas or hydrogen cyanide(HCN), B3 = Acid gas or hydrogencyanide(HCN), E = Sulfur dioxide(SO2), G = Agricultural chemicals, K = Ammonia(NH3), Hg = Mercury, NO = Oxides of nitrogen, MB = Methyl bromide, AX = Low boiling point organic compounds(below 65 degC)

Eye Protection

Chemical goggles.

Full face shield may be required for supplementary but never for primary protection of eyes Contact lenses may pose a special hazard; soft contact lenses may absorb and concentrate irritants. A written policy document, describing the wearing of lens or restrictions on use, should be created for each workplace or task. This should include a review of lens absorption and adsorption for the class of chemicals in use and an account of injury experience. Medical and first-aid personnel should be trained in their removal and suitable equipment should be readily available. In the event of chemical exposure, begin eye irrigation immediately and remove contact lens as soon as practicable. Lens should be removed at the first signs of eye redness or irritation - lens should be removed in a clean environment only after workers have washed hands thoroughly. [CDC NIOSH Current Intelligence Bulletin 59], [AS/NZS 1336 or national equivalent]

Hand Protection

Wear chemical protective gloves, e.g. PVC.

Wear safety footwear or safety gumboots, e.g. Rubber

When handling corrosive liquids, wear trousers or overalls outside of boots, to avoid spills entering boots.

Personal Protective Equipment

Other protection:

Overalls.

PVC Apron.

PVC protective suit may be required if exposure severe.

Eyewash unit.

Ensure there is ready access to a safety shower.

Body Protection

See Hand protection below

See Other protection below

Other Information

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 computergenerated selection:

Septone RUST CONVERTER

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.

9. PHYSICAL AND CHEMICAL PROPERTIES

Form

Liquid

Appearance

Clear pale green mobile, acidic liquid with a neutral odour; mixes with water.

Odour

Not Available

Decomposition Temperature

Not Available

Melting Point

Not Available

Freezing Point

Not Available

Solubility in Water

Miscible

Specific Gravity

1.240 @ 25 °C

pH

0.8 (as supplied)

Not Available as a solution(1%)

Vapour Pressure

0.3kPa) @ 20°C

Vapour Density (Air=1)

Not Available

Evaporation Rate

Not Available

Odour Threshold

Not Available

Viscosity

Not Available

Volatile Component

61 %w/wvol

Partition Coefficient: n-octanol/water

Not Available

Surface tension

Not Available

Flash Point

Not Applicable

Flammability

Not Available

Auto-Ignition Temperature

Not Applicable

Explosion Limit - Upper

Not Applicable

Explosion Limit - Lower

Not Applicable

Explosion Properties

Not Available

Molecular Weight

Not Applicable

Oxidising Properties

Not Available

Initial boiling point and boiling range

100°C

Other Information

Taste: Not Available

Gas group: Not Available

VOC g/L: Not Available

10. STABILITY AND REACTIVITY

Reactivity

See section 7 (HANDLING AND STORAGE)

Chemical Stability

Contact with alkaline material liberates heat

Presence of incompatible materials.

Product is considered stable.

Hazardous polymerisation will not occur.

Conditions to Avoid

See section 7 (HANDLING AND STORAGE)

Incompatible materials

See section 7 (HANDLING AND STORAGE)

Hazardous Decomposition Products

See section 5 (FIRE FIGHTING MEASURES)

Possibility of hazardous reactions

See section 7 (HANDLING AND STORAGE)

11. TOXICOLOGICAL INFORMATION

Toxicology Information

Septone RUST CONVERTER:

TOXICITY	IRRITATION
Not Available	Not Available

Benzene:

TOXICITY	IRRITATION
Dermal (rabbit) LD50: >1260 mg/kg* [Monsanto]*	
Inhalation (Mouse) LC50: 25.5 mg/m ³ /4h	Eye (rabbit): 119 mg - SEVERE
Inhalation (Rat) LC50: 25.5 mg/m ³ /4h	Skin (rabbit):595 mg/24h -
Oral (rat) LD50: 1530 mg/kg	SEVERE
Oral (rat) LD50: 3500 mg/kg*	
Not Available	Not Available

Water:

TOXICITY	IRRITATION
Not Available	Not Available

PHOSPHORIC ACID:

No significant acute toxicological data identified in literature search.

for acid mists, aerosols, vapours Data from assays for genotoxic activity in vitro suggest that eukaryotic cells are susceptible to genetic damage when the pH falls to about 6.5. Cells from the respiratory tract have not been examined in this respect. Mucous secretion may protect the cells of the airways from direct exposure to inhaled acidic mists, just as mucous plays an important role in protecting the gastric epithelium from its auto-secreted hydrochloric acid. In considering whether pH itself induces genotoxic events in vivo in the respiratory system, comparison should be made with the human stomach, in which gastric juice may be at pH 1-2 under fasting or nocturnal conditions, and with the human urinary bladder, in which the pH of urine can range from <5 to > 7 and normally averages 6.2. Furthermore, exposures to low pH in vivo differ from exposures in vitro in that, in vivo, only a portion of the cell surface is subjected to the adverse conditions, so that perturbation of intracellular homeostasis may be maintained more readily than in vitro.

The material may produce severe irritation to the eye causing pronounced inflammation. Repeated or prolonged exposure to irritants may produce conjunctivitis.

The material may produce severe skin irritation after prolonged or repeated exposure, and may produce a contact dermatitis (nonallergic).

This form of dermatitis is often characterised by skin redness (erythema) thickening of the epidermis.

Histologically there may be intercellular oedema of the spongy layer (spongiosis) and intracellular oedema of the epidermis. Prolonged contact is unlikely, given the severity of response, but repeated exposures may produce severe ulceration.

Asthma-like symptoms may continue for months or even years after exposure to the material ceases. This may be due to a non-allergenic condition known as reactive airways dysfunction syndrome (RADS) which can occur following exposure to high levels of highly irritating compound. Key criteria for the diagnosis of RADS include the absence of preceding respiratory disease, in a non-atopic individual, with abrupt onset of persistent asthma-like symptoms within minutes to hours of a documented exposure to the irritant. A reversible airflow pattern, on spirometry, with the presence of moderate to severe bronchial hyperreactivity on methacholine challenge testing and the lack of minimal lymphocytic inflammation, without eosinophilia, have also been included in the criteria for diagnosis of RADS. RADS (or asthma) following an irritating inhalation is an infrequent disorder with rates related to the concentration of and duration of exposure to the irritating substance.

Industrial bronchitis, on the other hand, is a disorder that occurs as result of exposure due to high concentrations of irritating substance (often particulate in nature) and is completely reversible after exposure ceases. The disorder is characterised by dyspnea, cough and mucus production.

Phosphoric acid (85%)

WATER: No significant acute toxicological data identified in literature search.

Acute Toxicity: Acute Toxicity (Oral) Category 4

Respiratory or Skin sensitisation: Not Applicable

Ingestion

Accidental ingestion of the material may be harmful; animal experiments indicate that ingestion of less than 150 gram may be fatal or may produce serious damage to the health of the individual.

The material can produce chemical burns within the oral cavity and gastrointestinal tract following ingestion.

Ingestion of large quantity of phosphoric acid may cause severe abdominal pains, thirst, acidaemia, difficult breathing, convulsions, collapse, shock and death.

Although less hazardous than nitric and sulfuric acid, phosphoric acid has equal corrosive action upon ingestion. Death of an individual 19 days after ingestion of phosphoric acid was due to recurrent internal haemorrhage. Necrosis of the upper and lower digestive tract and pancreas was evident at autopsy.

Inhalation

Acidic corrosives produce respiratory tract irritation with coughing, choking and mucous membrane damage. Symptoms of exposure may include dizziness, headache, nausea and weakness. In more severe exposures, pulmonary oedema may be evident either immediately or after a latent period of 5-72 hours. Symptoms of pulmonary oedema include a tightness in the chest, dyspnoea, frothy sputum and cyanosis. Examination may reveal hypotension, a weak and rapid pulse and moist rates. Death, due to anoxia, may occur several hours after onset of the pulmonary oedema.

Inhalation of phosphoric acid vapour or mist may cause choking, coughing, headache, weakness and dizziness. Prolonged or repeated inhalation of vapour or mist may cause pulmonary oedema (lungdamage) and cyanosis Exposure to high concentrations causes bronchitis and is characterised by the onset of haemorrhagic pulmonary oedema.

Skin

The material can produce chemical burns following direct contact with the skin.

Open cuts, abraded or irritated skin should not be exposed to this material Entry into the blood-stream through, for example, cuts, abrasions, puncture wounds 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.

Eye

The material can produce chemical burns to the eye following direct contact. Vapours or mists may be extremely irritating.

Skin corrosion/irritation

Skin Corrosion/Irritation Category 1B

Serious eye damage/irritation

Serious Eye Damage Category 1

Mutagenicity

Not Applicable

Carcinogenicity

Not Applicable

Reproductive Toxicity

Not Applicable

STOT-single exposure

Not Applicable

STOT-repeated exposure

Not Applicable

Aspiration Hazard

Not Applicable

Chronic Effects

Repeated or prolonged exposure to acids may result in the erosion of teeth, inflammatory and ulcerative changes in the mouth and necrosis (rarely) of the jaw. Bronchial irritation, with cough, and frequent attacks of bronchial pneumonia may ensue. Gastrointestinal disturbances may also occur. Chronic exposures may result in dermatitis and/or conjunctivitis.

The impact of inhaled acidic agents on the respiratory tract depends upon a number of interrelated factors. These include physicochemical characteristics, e.g., gas versus aerosol; particle size (small particles can penetrate deeper into the lung); water solubility (more soluble agents are more likely to be removed in the nose and mouth). Given the general lack of information on the particle size of aerosols involved in occupational exposures to acids, it is difficult to identify their principal deposition site within the respiratory tract. Acid mists containing particles with a diameter of up to a few micrometers will be deposited in both the upper

and lower airways. They are irritating to mucous epithelia, they cause dental erosion, and they produce acute effects in the lungs (symptoms and changes in pulmonary function). Asthmatics appear to be at particular risk for pulmonary effects.

12. ECOLOGICAL INFORMATION

Ecotoxicity

On the basis of available evidence concerning either toxicity, persistence, potential to accumulate and or observed environmental fate and behaviour, the material may present a danger, immediate or long-term and /or delayed, to the structure and/ or functioning of natural ecosystems.

May cause long-term adverse effects in the aquatic environment.

Prevent, by any means available, spillage from entering drains or water courses.

DO NOT discharge into sewer or waterways.

[High concentrations of this product in receiving waters will injure aquatic life due to the effect of low pH. Low concentrations in receiving waters may act as a plant nutrient or precipitate heavy metals.

Persistence and degradability

Ingredient Persistence: Water/Soil Persistence: Air

Not Available Not Available Not Available

Mobility

Ingredient Mobility

Not Available Not Available

Bioaccumulative Potential

Ingredient Bioaccumulation

Not Available Not Available

13. DISPOSAL CONSIDERATIONS

Waste Disposal

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.

Treat and neutralise at an approved treatment plant. Treatment should involve: Neutralisation with soda-ash or soda-lime followed by: burial in a land-fill specifically licenced to accept chemical and / or pharmaceutical wastes or Incineration in a licenced apparatus (after admixture with suitable combustible material).

Decontaminate empty containers with 5% aqueous sodium hydroxide or soda ash, followed by water. Observe all label safeguards until containers are cleaned and destroyed.

14. TRANSPORT INFORMATION

Transport Information

Proper shipping name:

PHOSPHORIC ACID, SOLUTION

Marine Pollutant: NO

Land transport (ADG)

UN number: 1805

Packing group: III

UN proper shipping name: PHOSPHORIC ACID, SOLUTION

Environmental hazard: No relevant data

Transport hazard class(es)

Class: 8

Special precautions for user

Special provisions: 223

limited quantity: 5 L

Air transport (ICAO-IATA / DGR)

UN number: 1805

Packing group: III
UN proper shipping name: Phosphoric acid, solution
Environmental hazard: No relevant data
Transport hazard class(es)
ICAO/IATA Class: 8
ERG Code: 8L
Special precautions for user
Special provisions: A3A803
Cargo Only Packing Instructions: 856
Cargo Only Maximum Qty / Pack: 60 L
Passenger and Cargo Packing Instructions :852
Passenger and Cargo Maximum Qty / Pack: 5 L
Passenger and Cargo Limited Quantity Packing Instructions: Y841
Passenger and Cargo Maximum Qty / Pack: 1 L

Sea transport (IMDG-Code / GGVSee)
UN number: 1805
Packing group: III
UN proper shipping name: PHOSPHORIC ACID SOLUTION
Environmental hazard: No relevant data
Transport hazard class(es)
IMDG Class: 8
Special precautions for user
EMS Number: F-A,S-B
Special provisions: 223
Limited Quantities: 5 L

U.N. Number

1805

UN proper shipping name

PHOSPHORIC ACID, SOLUTION

Transport hazard class(es)

8

Packing Group

III

Hazchem Code

2R; 2X

IERG Number

37

15. REGULATORY INFORMATION

Regulatory information

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

Phosphoric acid(7664-38-2) is found on the following regulatory lists:

'IMO MARPOL 73/78 (Annex II) - List of Noxious Liquid Substances Carried in Bulk', 'IMO IBC Code Chapter 17: Summary of minimum requirements', 'OECD List of High Production Volume (HPV) Chemicals', 'Australia High Volume Industrial Chemical List (HVICL)', 'International Numbering System for Food Additives', 'International Council of Chemical Associations (ICCA) - High Production

Volume List', 'Australia Inventory of Chemical Substances (AICS)', 'GESAMP/EHS Composite List - GESAMP Hazard Profiles', 'FisherTransport Information', 'Sigma-AldrichTransport Information', 'Australia Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP) - Appendix F (Part 3)', 'Australia National Pollutant Inventory', 'Australia Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP) - Appendix E (Part 2)', 'Australia Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP) - Schedule 6', 'Australia Exposure Standards', 'Australia Hazardous Substances Information System - Consolidated Lists', 'Australia Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP) - Schedule 5', 'International Air Transport Association (IATA) Dangerous Goods Regulations', 'International Maritime Dangerous Goods Requirements (IMDG Code)', 'Australia Dangerous Goods Code (ADG Code) - List of Emergency Action Codes', 'Belgium Federal Public Service Mobility and Transport, Regulations concerning the International Carriage of Dangerous Goods by Rail - Table A: Dangerous Goods List - RID 2013 (Dutch)',

'International Maritime Dangerous Goods Requirements (IMDG Code) - Substance Index', 'Australia Dangerous Goods Code (ADG Code) - Dangerous Goods List', 'OSPAR National List of Candidates for Substitution ?United Kingdom'

Water(7732-18-5) is found on the following regulatory lists:

'OECD List of High Production Volume (HPV) Chemicals', 'Australia High Volume Industrial Chemical List (HVICL)', 'International Fragrance Association (IFRA) Survey: Transparency List', 'Australia Inventory of Chemical Substances (AICS)', 'IMO IBC Code Chapter 18: List of products to which the Code does not apply', 'OSPAR National List of Candidates for Substitution ?Norway', 'Sigma-Aldrich Transport Information'

Poisons Schedule

S6

16. OTHER INFORMATION

Empirical Formula & Structural Formula

Not Applicable

Other Information

Version No: 8.1.1.1

Safety Data Sheet according to WHS and ADG requirements 10/12/2013

The (M)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.

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END OF SDS

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