

SAFETY DATA SHEET

HARVEYS MACHINE DISHWASHING POWDER

Infosafe No.: MTRRZ
ISSUED Date : 17/01/2018
ISSUED by: ACCO BRANDS AUSTRALIA PTY
LTD

1. IDENTIFICATION

GHS Product Identifier

HARVEYS MACHINE DISHWASHING POWDER

Product Code

5KG - 04042013

Company Name

ACCO BRANDS AUSTRALIA PTY LTD

Address

17-19 Waterloo Street Queanbeyan
NSW 2620 Australia

Telephone/Fax Number

Tel: +61-2-9674 0900

Fax: +61-2-9674 0910

Emergency phone number

13 11 26

E-mail Address

sds.anz@acco.com

Recommended use of the chemical and restrictions on use

Relevant identified uses: Detergent for machine dishwashers

Other Names

Name	Product Code
MACHINE DISHWASHING POWDER	5KG - 04042013

Additional Information

Synonyms: Not Available

Website: www.accobrands.com.au

2. HAZARD IDENTIFICATION

GHS classification of the substance/mixture

[1] Skin Corrosion/Irritation Category 1B, Serious Eye Damage Category 1, Specific target organ toxicity - single exposure Category 3 (respiratory tract irritation), Acute Aquatic Hazard Category 3, Chronic Aquatic Hazard Category 3, Metal Corrosion Category 1

Signal Word (s)

DANGER

Hazard Statement (s)

H290 May be corrosive to metals.

H314 Causes severe skin burns and eye damage.

H318 Causes serious eye damage.

H335 May cause respiratory irritation.

H402 Harmful to aquatic life.

H412 Harmful to aquatic life with long lasting effects.

Precautionary Statement (s)

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P101 If medical advice is needed, have product container or label at hand.

P102 Keep out of reach of children.

P103 Read label before use.

Pictogram (s)

Corrosion, Exclamation mark



Precautionary statement – Prevention

P234 Keep only in original container.

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

P271 Use only outdoors or in a well-ventilated area.

P273 Avoid release to the environment.

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

Precautionary statement – 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 for 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.

P310 Immediately call a POISON CENTER or doctor/physician.

P363 Wash contaminated clothing before reuse.

P390 Absorb spillage to prevent material damage.

Precautionary statement – Storage

P403+P233 Store in a well-ventilated place. Keep container tightly closed.

P405 Store locked up.

Precautionary statement – Disposal

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

Other Information

Classification of the substance or mixture:

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

Legend: 1. Classified by Chemwatch; 2. Classification drawn from HSIS; 3. Classification drawn from EC Directive 1272/2008 - Annex VI

3. COMPOSITION/INFORMATION ON INGREDIENTS

Ingredients

Name	CAS	Proportion
Sodium carbonate	497-19-8	44 %weight
Sodium Tripolyphosphate	7758-29-4	24.5 %weight
Polypropylene/ polyethylene glycol copolymer	9003-11-6	0.5 %weight
sodium metasilicate, anhydrous	6834-92-0	30 %weight
Sodium Dichloroisocyanurate	2893-78-9	0.56 %weight

Other Information

Substances:

See section below for composition of Mixtures

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

For acute or short-term repeated exposures to highly alkaline materials:

Respiratory stress is uncommon but present occasionally because of soft tissue edema.

Unless endotracheal intubation can be accomplished under direct vision, cricothyroidotomy or tracheotomy may be necessary.

Oxygen is given as indicated.

The presence of shock suggests perforation and mandates an intravenous line and fluid administration.

Damage due to alkaline corrosives occurs by liquefaction necrosis whereby the saponification of fats and solubilisation of proteins allow deep penetration into the tissue.

Alkalis continue to cause damage after exposure.

INGESTION:

Milk and water are the preferred diluents

No more than 2 glasses of water should be given to an adult.

Neutralising agents should never be given since exothermic heat reaction may compound injury.

* Catharsis and emesis are absolutely contra-indicated.

* Activated charcoal does not absorb alkali.

* Gastric lavage should not be used.

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Supportive care involves the following:

Withhold oral feedings initially.

If endoscopy confirms transmucosal injury start steroids only within the first 48 hours.

Carefully evaluate the amount of tissue necrosis before assessing the need for surgical intervention.

Patients should be instructed to seek medical attention whenever they develop difficulty in swallowing (dysphagia).

SKIN AND EYE:

Injury should be irrigated for 20-30 minutes.

Eye injuries require saline. [Ellenhorn & 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:

Avoid contamination with oxidising agents i.e. nitrates, oxidising acids, chlorine bleaches, pool chlorine etc. as ignition may result.

Fire/Explosion Hazard:

Combustible. Will burn if ignited. Combustion products include: carbon monoxide (CO), carbon dioxide (CO₂), phosphorus oxides (PO_x), silicon dioxide (SiO₂), other pyrolysis products typical of burning organic materia

May emit corrosive fumes.

Hazchem Code

2X

Decomposition Temperature

Not Available

6. ACCIDENTAL RELEASE MEASURES

Clean-up Methods - Small Spillages

Environmental hazard - contain spillage.

Remove all ignition sources.

Clean up all spills immediately.

Avoid contact with skin and eyes.

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

Use dry clean up procedures and avoid generating dust.

Place in a suitable, labelled container for waste disposal.

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 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.

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Prevent, by any means available, spillage from entering drains or water course.
Consider evacuation (or protect in place).
Stop leak if safe to do so.
Contain spill with sand, earth or vermiculite.
Collect recoverable product into labelled containers for recycling.

Other Information

Personal Protective Equipment advice is contained in Section 8 of the SDS.

7. HANDLING AND STORAGE

Precautions for Safe Handling

Safe handling:

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.

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 SDS.
DO NOT store near acids, or oxidising agents
No smoking, naked lights, heat or ignition sources.

Conditions for safe storage, including any incompatibilities

Suitable container:

DO NOT use aluminium or galvanised containers
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.
For low viscosity materials
Drums and jerricans must be of the non-removable head type.
Where a can is to be used as an inner package, the can must have a screwed enclosure.
For materials with a viscosity of at least 2680 cSt. (23 deg. C) and solids (between 15 C deg. and 40 deg C.):
Removable head packaging;
Cans with friction closures and
Low pressure tubes and cartridges
May be used.

-
Where combination packages are used, and the inner packages are of glass, porcelain or stoneware, there must be sufficient inert cushioning material in contact with inner and outer packages unless the outer packaging is a close fitting moulded plastic box and the substances are not incompatible with the plastic.

Storage incompatibility:

Sodium carbonate:

Aqueous solutions are strong bases
Reacts violently with finely divided aluminium, fluorine, lithium, phosphorus pentoxide, sulfuric acid
Reacts with fluorine gas at room temperature, generating incandescence.
Is incompatible with organic anhydrides, acrylates, alcohols, aldehydes, alkylene oxides, substituted allyls, cellulose nitrate, cresols, caprolactam solution, epichlorohydrin, ethylene dichloride, isocyanates, ketones, glycols, nitrates, phenols, phosphorus pentoxide
2,4,6-trinitrotoluene

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Forms explosive material with 2,4,5-trinitrotoluene and increases the thermal sensitivity of 2,4,6-trinitrotoluene (TNT) by decreasing the temperature of explosion from 297 deg. C to 218 deg. C

Attacks metal.

In presence of moisture, the material is corrosive to aluminium, zinc and tin producing highly flammable hydrogen gas.

Phosphates are incompatible with oxidising and reducing agents.

Phosphates are susceptible to formation of highly toxic and flammable phosphine gas in the presence of strong reducing agents such as hydrides.

Partial oxidation of phosphates by oxidizing agents may result in the release of toxic phosphorus oxides.

Avoid oxidising agents, acids, acid chlorides, acid anhydrides, chloroformates.

Avoid contact with copper, aluminium and their alloys.

Avoid storage of dichloroisocyanurates with ammonia, urea or similar nitrogen containing compounds, inorganic reducing compounds, calcium hypochlorite, alkalis and water.

Corrosive to most metals in the presence of moisture.

Many compounds containing more than one N-halogen bond are unstable and exhibit explosive properties.

BRETHERRICK L.: Handbook of Reactive Chemical Hazards

41nhalim

Contact with acids produces toxic fumes

Avoid strong bases.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Occupational exposure limit values

Control parameters:

OCCUPATIONAL EXPOSURE LIMITS (OEL):

INGREDIENT DATA:

Not Available

EMERGENCY LIMITS:

Ingredient: sodium carbonate

Material name: Sodium carbonate

TEEL-1: 12 mg/m³

TEEL-2: 130 mg/m³

TEEL-3: 780 mg/m³

Ingredient: sodium tripolyphosphate

Material name: Sodium tripolyphosphate

TEEL-1: 0.22 mg/m³

TEEL-2: 2.5 mg/m³

TEEL-3: 620 mg/m³

Ingredient: polypropylene/ polyethylene glycol copolymer

Material name: Polypropylene-polyethylene glycol; (Pluronic L-81)

TEEL-1: 6.9 mg/m³

TEEL-2: 76 mg/m³

TEEL-3: 460 mg/m³

Ingredient: sodium metasilicate, anhydrous

Material name: Sodium metasilicate pentahydrate

TEEL-1: 45 mg/m³

TEEL-2: 45 mg/m³

TEEL-3: 170 mg/m³

Ingredient: sodium metasilicate, anhydrous

Material name: Sodium silicate; (Sodium metasilicate)

TEEL-1: 18 mg/m³

TEEL-2: 230 mg/m³

TEEL-3: 230 mg/m³

Ingredient: sodium carbonate

Original IDLH: Not Available

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Revised IDLH: Not Available

Ingredient: sodium tripolyphosphate

Original IDLH: Not Available

Revised IDLH: Not Available

Ingredient: polypropylene/ polyethylene glycol copolymer

Original IDLH: Not Available

Revised IDLH: Not Available

Ingredient: sodium metasilicate, anhydrous

Original IDLH: Not Available

Revised IDLH: Not Available

Ingredient: sodium dichloroisocyanurate

Original IDLH: Not Available

Revised IDLH: Not Available

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.

Respiratory Protection

Type AB-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: up to 10 x ES

Half-Face Respirator: AB-AUS P2

Full-Face Respirator: -

Powered Air Respirator: AB-PAPR-AUS / Class 1 P2

Required Minimum Protection Factor: up to 50 x ES

Half-Face Respirator: -

Full-Face Respirator: AB-AUS / Class 1 P2

Powered Air Respirator: -

Required Minimum Protection Factor: up to 100 x ES

Half-Face Respirator: -

Full-Face Respirator: AB-2 P2

Powered Air Respirator: AB-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 hydrogen cyanide (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

Safety glasses with unperforated side shields may be used where continuous eye protection is desirable, as in laboratories; spectacles are not sufficient where complete eye protection is needed such as when handling bulk-quantities, where there is a danger of splashing, or if the material may be under pressure.

Chemical goggles whenever there is a danger of the material coming in contact with the eyes; goggles must be properly fitted.

Full face shield (20 cm, 8 in minimum) may be required for supplementary but never for primary protection of eyes; these afford

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face protection.

Alternatively a gas mask may replace splash goggles and face shields.

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. 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.

Hand Protection

Elbow length PVC gloves

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:

Machine Dishwashing Powder

Material CPI

NATURAL RUBBER A

NITRILE A

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.

Thermal Hazards

Not Available

Body Protection

Overalls.

PVC Apron.

PVC protective suit may be required if exposure severe.

Eyewash unit.

Ensure there is ready access to a safety shower.

9. PHYSICAL AND CHEMICAL PROPERTIES

Form

Solid

Appearance

A white powder with blue beads

Odour

Not Available

Decomposition Temperature

Not Available

Solubility in Water

Miscible

pH

Not Available (as supplied)

11-13 (as a solution (1%))

Vapour Pressure

Not Available

Vapour Density (Air=1)

Not Available

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Evaporation Rate

Not Available

Physical State

Solid

Odour Threshold

Not Available

Viscosity

Not Available

Volatile Component

Not Available

Partition Coefficient: n-octanol/water

Not Available

Surface tension

Not Applicable

Flash Point

Not Available

Flammability

Not Available

Auto-Ignition Temperature

Not Available

Explosion Limit - Upper

Not Available

Explosion Limit - Lower

Not Available

Explosion Properties

Not Available

Molecular Weight

Not Available

Oxidising Properties

Not Available

Initial boiling point and boiling range

Not Available

Relative density

1.00 (Water = 1)

Melting/Freezing Point

Not Available

Other Information

Taste: Not Available

Gas group: Not Available

VOC g/L: Not Available

10. STABILITY AND REACTIVITY

Reactivity

See section 7

Chemical Stability

Unstable in the presence of incompatible materials.

Product is considered stable.

Hazardous polymerisation will not occur.

Conditions to Avoid

See section 7

Incompatible materials

See section 7

Hazardous Decomposition Products

See section 5

Possibility of hazardous reactions

See section 7

11. TOXICOLOGICAL INFORMATION

Toxicology Information

Machine Dishwashing Powder

TOXICITY: Not Available

IRRITATION: Not Available

Sodium carbonate

TOXICITY:

Dermal (rat) LD50: >2000 mg/kg*E[2]

Inhalation (guinea pig) LC50: 0.8 mg/L/2h[2]

Inhalation (mouse) LC50: 1.2 mg/L/2h[2]

Inhalation (rat) LC50: 2.3 mg/L/2he[2]

Oral (rat) LD50: 2800 mg/kg*d[2]

IRRITATION:

Eye (rabbit): 100 mg/24h moderate

Eye (rabbit): 100 mg/30s mild

Eye (rabbit): 50 mg SEVERE

Skin (rabbit): 500 mg/24h mild

Sodium tripolyphosphate

TOXICITY:

Dermal (rabbit) LD50: >3160 mg/kg*[2]

Oral (rat) LD50: >2000 mg/kg[1]

IRRITATION: Nil reported

Polypropylene/ polyethylene glycol copolymer

TOXICITY:

Inhalation (rat) LC50: 0.32 mg/L/4H[2]

Oral (rat) LD50: 2300 mg/kg*d[2]

IRRITATION:

(as Teric PE62)

Eye (rabbit): 500 mg/24h - mild

Skin (rabbit): 500 mg/24h - mild

Sodium metasilicate, anhydrous

TOXICITY:

Dermal (rat) LD50: >5000 mg/kg[1]

Oral (rat) LD50: 600 mg/kg[1]

IRRITATION:

Skin (human): 250 mg/24h SEVERE

Skin (rabbit): 250 mg/24h SEVERE

Sodium dichloroisocyanurate

TOXICITY:

Dermal (rat) LD50: >5000 mg/kg[1]

Inhalation (rat) LC50: 293 ppm/1 hour[2]

Oral (rat) LD50: 700 mg/kg*[2]

IRRITATION:

Eye (rabbit): 10 mg/24hr-moderate

Skin (rabbit): Severe *

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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

Machine Dishwashing Powder:

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.

For sodium carbonate:

Sodium carbonate has no or a low skin irritation potential but it is considered irritating to the eyes. Due to the alkaline properties an irritation of the respiratory tract is also possible.

No valid animal data are available on repeated dose toxicity studies by oral, dermal, inhalation or by other routes for sodium carbonate. A repeated dose inhalation study, which was not reported in sufficient detail, revealed local effects on the lungs which could be expected based on the alkaline nature of the compound. Under normal handling and use conditions neither the concentration of sodium in the blood nor the pH of the blood will be increased and therefore sodium carbonate is not expected to be systemically available in the body. It can be stated that the substance will neither reach the foetus nor reach male and female reproductive organs, which shows that there is no risk for developmental toxicity and no risk for toxicity to reproduction. This was confirmed by a developmental study with rabbits, rats and mice. An in vitro mutagenicity test with bacteria was negative and based on the structure of sodium carbonate no genotoxic effects are expected.

The material may cause severe skin irritation after prolonged or repeated exposure and may produce on contact skin redness, swelling, the production of vesicles, scaling and thickening of the skin. Repeated exposures may produce severe ulceration.

SODIUM CARBONATE:

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The material may cause skin irritation after prolonged or repeated exposure and may produce on contact skin redness, swelling, the production of vesicles, scaling and thickening of the skin.

SODIUM TRIPOLYPHOSPHATE:

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POLYPROPYLENE/POLYETHYLENE GLYCOL COPOLYMER:

The material may be irritating to the eye, with prolonged contact causing inflammation. Repeated or prolonged exposure to irritants may produce conjunctivitis.

The material may cause skin irritation after prolonged or repeated exposure and may produce on contact skin redness, swelling, the production of vesicles, scaling and thickening of the skin.

* Varies - dependent on degree of ethoxylation.

SODIUM METASILICATE, ANHYDROUS:

The material may cause severe skin irritation after prolonged or repeated exposure and may produce on contact skin redness, swelling, the production of vesicles, scaling and thickening of the skin. 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.

SODIUM DICHLOROISOCYANURATE:

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.

The material may produce moderate eye irritation leading to inflammation. Repeated or prolonged exposure to irritants may produce conjunctivitis.

The material may cause severe skin irritation after prolonged or repeated exposure and may produce on contact skin redness, swelling, the production of vesicles, scaling and thickening of the skin. Repeated exposures may produce severe ulceration.

Dermal (rabbit) LD50: 3160-5100 mg/kg * Manufacturer

Acute Toxicity: Data Not Available to make classification

Ingestion

Ingestion of alkaline corrosives may produce burns around the mouth, ulcerations and swellings of the mucous membranes, profuse saliva production, with an inability to speak or swallow. Both the oesophagus and stomach may experience burning pain; vomiting and diarrhoea may follow.

Accidental ingestion of the material may be damaging to the health of the individual.

Inorganic polyphosphates are used extensively in domestic and industrial products. Experiments on rats showed kidney damage, growth retardation, and tetany due to low calcium.

Oral intake of dichloroisocyanurates is corrosive to the mouth, gullet and internal organs, depending on the concentration and may result in weakness, lethargy, tremors, salivation, excessive secretion of tears and possible coma. Its toxicity seems to be mainly related to the corrosive effect on the stomach lining. Severity of symptoms seems to be more related to concentration than amount swallowed.

As absorption of phosphates from the bowel is poor, poisoning this way is less likely. Effects can include vomiting, tiredness, fever, diarrhoea, low blood pressure, slow pulse, cyanosis, spasms of the wrist, coma and severe body spasms.

Inhalation

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The material can cause respiratory irritation in some persons. The body's response to such irritation can cause further lung damage.

Inhaling corrosive bases may irritate the respiratory tract. Symptoms include cough, choking, pain and damage to the mucous membrane.

Chlorine vapour is extremely irritating to the airways and lungs, causing coughing, choking, breathing difficulty, chest pain, headache, vomiting, fluid accumulation in the lungs, chest infection and loss of consciousness. Effects may be delayed. Long term exposure (at workplace) may lead to corrosion of the teeth, irritate the linings of the nose and may increase the likelihood of developing tuberculosis. Recent studies have not confirmed these findings. Very low concentrations may irritate the eyes, nose and throat and cause the above reactions.

Inhalation of sodium carbonate may cause coughing, sore throat, difficulty breathing. Fluid accumulation in the lungs can occur with exposure to high doses or over a long period of time.

Skin

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

Skin contact is not thought to have harmful health effects (as classified under EC Directives); the material may still produce health damage following entry through wounds, lesions or abrasions.

Skin contact with alkaline corrosives may produce severe pain and burns; brownish stains may develop. The corroded area may be soft, gelatinous and necrotic; tissue destruction may be deep.

Contact with concentrated solutions of sodium carbonate may cause tissue damage - "soda ulcers..."

Open cuts, abraded or irritated skin should not be exposed to this material

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.

Eye

If applied to the eyes, this material causes severe eye damage.

Direct eye contact with corrosive bases can cause pain and burns. There may be swelling, epithelium destruction, clouding of the cornea and inflammation of the iris. Mild cases often resolve; severe cases can be prolonged with complications such as persistent swelling, scarring, permanent cloudiness, bulging of the eye, cataracts, eyelids glued to the eyeball and blindness.

510sodacarb

Skin corrosion/irritation

Data required to make classification available

Serious eye damage/irritation

Data required to make classification available

Mutagenicity

Data Not Available to make classification

Respiratory sensitisation

Data Not Available to make classification

Skin Sensitisation

Data Not Available to make classification

Carcinogenicity

Data Not Available to make classification

Reproductive Toxicity

Data Not Available to make classification

STOT-single exposure

Data Not Available to make classification

STOT-repeated exposure

Data Not Available to make classification

Aspiration Hazard

Data Not Available to make classification

Chronic Effects

Repeated or prolonged exposure to corrosives 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. Long-term exposure to respiratory irritants may result in disease of the airways involving difficult breathing and related systemic problems.

Substance accumulation, in the human body, may occur and may cause some concern following repeated or long-term occupational exposure.

The chlorinated isocyanurates have low acute manifestation. It irritates the eyes and skin but is not considered to be skin

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sensitizers. Studies show that it does not cause cancer or foetal toxicity on acute exposure. However, on chronic inhalation and ingestion exposure, it produces toxicity involving organ damage, breathing difficulty, headaches and possibly reproductive and foetal toxicity.

Long term inhalation of sodium carbonate may result in nose damage and lung disease.

Sodium phosphate dibasic can cause stones in the kidney, loss of mineral from the bones and loss of thyroid gland function.

In long-term animal studies, inorganic polyphosphates produced growth inhibition, increased kidney weights, bone decalcification, enlargement of the parathyroid gland, inorganic phosphate in the urine, focal necrosis of the kidney and alterations of muscle fibre size. Inorganic phosphates have not been shown to cause cancer, genetic damage or reproductive or developmental damage in animal tests.

12. ECOLOGICAL INFORMATION

Ecotoxicity

Ingredient: sodium carbonate

Endpoint: EC50

Test Duration (hr): 48

Species: Crustacea

Value: ≈176mg/L

Source: 1

Ingredient: sodium carbonate

Endpoint: EC50

Test Duration (hr): 96

Species: Algae or other aquatic plants

Value: 242mg/L

Source: 4

Ingredient: sodium carbonate

Endpoint: NOEC

Test Duration (hr): 16

Species: Crustacea

Value: 424mg/L

Source: 4

Ingredient: sodium carbonate

Endpoint: LC50

Test Duration (hr): 96

Species: Fish

Value: 300mg/L

Source: 2

Ingredient: sodium carbonate

Endpoint: EC50

Test Duration (hr): 96

Species: Crustacea

Value: 67mg/L

Source: 2

Ingredient: sodium tripolyphosphate

Endpoint: EC50

Test Duration (hr): 48

Species: Crustacea

Value: >70.7- <101.3mg/L

Source: 2

Ingredient: sodium tripolyphosphate

Endpoint: EC50

Test Duration (hr): 96

Species: Algae or other aquatic plants

Value: 69.2mg/L

Source: 2

Ingredient: sodium metasilicate, anhydrous

Endpoint: EC50

Test Duration (hr): 96

Species: Crustacea

Value: 160mg/L

Source: 1

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Ingredient: sodium metasilicate, anhydrous
Endpoint: LC50
Test Duration (hr): 96
Species: Fish
Value: 180mg/L
Source: 1

Ingredient: sodium metasilicate, anhydrous
Endpoint: EC50
Test Duration (hr): 48
Species: Crustacea
Value: 1700mg/L
Source: 2

Ingredient: sodium metasilicate, anhydrous
Endpoint: EC50
Test Duration (hr): 72
Species: Algae or other aquatic plants
Value: 207mg/L
Source: 2

Ingredient: sodium dichloroisocyanurate
Endpoint: EC50
Test Duration (hr): 48
Species: Crustacea
Value: 0.11mg/L
Source: 4

Ingredient: sodium dichloroisocyanurate
Endpoint: EC50
Test Duration (hr): 48
Species: Crustacea
Value: 0.15mg/L
Source: 4

Ingredient: sodium dichloroisocyanurate
Endpoint: LC50
Test Duration (hr): 96
Species: Fish
Value: 0.217mg/L
Source: 4

Ingredient: sodium dichloroisocyanurate
Endpoint: NOEC
Test Duration (hr): 96
Species: Fish
Value: 0.056mg/L
Source: 2

Ingredient: sodium dichloroisocyanurate
Endpoint: EC50
Test Duration (hr): 72
Species: Algae or other aquatic plants
Value: >100mg/L
Source: 2

Legend:

Extracted from 1. IUCLID Toxicity Data 2. Europe ECHA Registered Substances - Ecotoxicological Information - Aquatic Toxicity 3. EPIWIN Suite V3.12 - 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

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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.

Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Do NOT allow product to come in contact with surface waters or to intertidal areas below the mean high water mark. Do not contaminate water when cleaning equipment or disposing of equipment wash-waters.

Wastes resulting from use of the product must be disposed of on site or at approved waste sites.

For sodium carbonate

Environmental Fate:

As sodium carbonate has the capacity to drastically increase the pH of an ecosystem, the extent of its effect on organisms depends on the buffer capacity of the aquatic or terrestrial ecosystem, and the pH tolerance levels of the organisms living there. While the use of sodium carbonate could potentially result in its release into aquatic systems and cause an increase in pH, these levels are usually monitored in effluents, and can easily be corrected. If corrective measures are taken to control the pH of waste water no significant increase in the receiving water or adverse environmental effects is not expected with the use of sodium carbonate. The sodium ion will remain in solution and not adsorb to particulate matter. In water the carbonate ions will re-equilibrate until equilibrium is established, and will finally be incorporated into the inorganic and organic carbon cycle.

Ecotoxicity:

Aquatic invertebrate EC50 (48 h): Cladoceran ceriodaphnia cf Dubia: 200-227 mg/l (immobilisation).

The variation in acute toxicity for aquatic organisms may be explained by the variation in buffer capacity of the test medium. In general, mortality of the test organisms was found at concentrations higher than 100 mg/l, but for Amphipoda, salmon and trout, lethal effects were observed at 67- 80 mg/l.

For Chlorinated Isocyanurates:

Aquatic Fate: Chlorinated isocyanurates hydrolyze in water to form isocyanuric acid (cyanuric acid) and hypochlorous acid (HOCl). Hydrolysis products are responsible for acute aquatic toxicity.

All of the chlorinated isocyanurates form hypochlorous acid when dissolved in water. Antimicrobial activity results from oxidation reactions with microbial enzyme systems. Isocyanuric acid and cyanuric acid remain and, under anaerobic conditions, degrade rapidly to carbon dioxide and ammonia.

Ecotoxicity: These products are likely to accumulate in mammals, fish and nontarget aquatic organisms. The chlorinated isocyanurates are practically nontoxic to birds; however, they are very highly toxic to cold water fish, highly toxic to warm water fish, highly toxic to freshwater invertebrates, and very highly toxic to estuarine and marine organisms.

For Phosphate: The principal problems of phosphate contamination of the environment relates to eutrophication processes in lakes and ponds. Phosphorus is an essential plant nutrient and is usually the limiting nutrient for blue-green algae.

Aquatic Fate: Lakes overloaded with phosphates is the primary catalyst for the rapid growth of algae in surface waters. Planktonic algae cause turbidity and flotation films. Shore algae cause ugly muddying, films and damage to reeds. Decay of these algae causes oxygen depletion in the deep water and shallow water near the shore. The process is self-perpetuating because an anoxic condition at the sediment/water interface causes the release of more adsorbed phosphates from the sediment. The growth of algae produces undesirable effects on the treatment of water for drinking purposes, on fisheries, and on the use of lakes for recreational purposes.

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

DO NOT discharge into sewer or waterways.

Persistence and degradability

Ingredient: sodium carbonate

Persistence: Water/Soil: LOW

Persistence: Air: LOW

Ingredient: sodium dichloroisocyanurate

Persistence: Water/Soil: HIGH

Persistence: Air: HIGH

Mobility

Mobility in soil:

Ingredient: sodium carbonate

Mobility: HIGH (KOC = 1)

Ingredient: sodium dichloroisocyanurate

Mobility: LOW (KOC = 28.65)

Bioaccumulative Potential

Ingredient: sodium carbonate

Bioaccumulation: LOW (LogKOW = -0.4605)

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Ingredient: sodium dichloroisocyanurate
Bioaccumulation: LOW (LogKOW = 1.2805)

13. DISPOSAL CONSIDERATIONS

Waste Disposal

Product / Packaging disposal:

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.

Treat and neutralise at an approved treatment plant.

Treatment should involve: Mixing or slurring in water; Neutralisation with suitable dilute acid 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. Observe all label safeguards until containers are cleaned and destroyed.

14. TRANSPORT INFORMATION

U.N. Number

1759

UN proper shipping name

CORROSIVE SOLID, N.O.S.

Transport hazard class(es)

8

Packing Group

III

Hazchem Code

2X

IERG Number

37

Other Information

Labels Required:

Marine Pollutant: NO

HAZCHEM: 2X

Land transport (ADG):

UN number: 1759

Packing group: III

UN proper shipping name: CORROSIVE SOLID, N.O.S.

Environmental hazard: Not Applicable

Transport hazard class(es):

Class: 8

Subrisk: Not Applicable

Special precautions for user:

Special provisions: 223 274

Limited quantity: 5 kg

Air transport (ICAO-IATA / DGR):

UN number: 1759

Packing group: III

UN proper shipping name: Corrosive solid, n.o.s. *

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Environmental hazard: Not Applicable
Transport hazard class(es):
ICAO/IATA Class: 8
ICAO / IATA Subrisk: Not Applicable
ERG Code: 8L
Special precautions for user:
Special provisions: A3A803
Cargo Only Packing Instructions: 864
Cargo Only Maximum Qty / Pack: 100 kg
Passenger and Cargo Packing Instructions: 860
Passenger and Cargo Maximum Qty / Pack: 25 kg
Passenger and Cargo Limited Quantity Packing Instructions: Y845
Passenger and Cargo Limited Maximum Qty / Pack: 5 kg

Sea transport (IMDG-Code / GGVSee):
UN number: 1759
Packing group: III
UN proper shipping name: CORROSIVE SOLID, N.O.S.
Environmental hazard: Not Applicable
Transport hazard class(es):
IMDG Class: 8
IMDG Subrisk: Not Applicable
Special precautions for user:
EMS Number: F-A, S-B
Special provisions: 223 274
Limited Quantities: 5 kg

Transport in bulk according to Annex II of MARPOL and the IBC code:
Not Applicable

15. REGULATORY INFORMATION

Regulatory information

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

SODIUM CARBONATE (497-19-8) IS FOUND ON THE FOLLOWING REGULATORY LISTS:

Australia Hazardous Substances Information System - Consolidated Lists

Australia Inventory of Chemical Substances (AICS)

SODIUM TRIPOLYPHOSPHATE (7758-29-4) IS FOUND ON THE FOLLOWING REGULATORY LISTS:

Australia Inventory of Chemical Substances (AICS)

POLYPROPYLENE/ POLYETHYLENE GLYCOL COPOLYMER (9003-11-6) IS FOUND ON THE FOLLOWING REGULATORY LISTS:

Australia Inventory of Chemical Substances (AICS)

SODIUM METASILICATE, ANHYDROUS (6834-92-0) IS FOUND ON THE FOLLOWING REGULATORY LISTS:

Australia Hazardous Substances Information System - Consolidated Lists

Australia Inventory of Chemical Substances (AICS)

SODIUM DICHLOROISOCYANURATE (2893-78-9) IS FOUND ON THE FOLLOWING REGULATORY LISTS:

Australia Hazardous Substances Information System - Consolidated Lists

Australia Inventory of Chemical Substances (AICS)

National Inventory: Australia - AICS

Status: Y

National Inventory: Canada - DSL

Status: Y

National Inventory: Canada - NDSL

Status: N (sodium tripolyphosphate; polypropylene/ polyethylene glycol copolymer; sodium metasilicate, anhydrous; sodium dichloroisocyanurate; sodium carbonate)

National Inventory: China - IECSC

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Status: Y
National Inventory: Europe - EINEC / ELINCS / NLP
Status: N (polypropylene/ polyethylene glycol copolymer)
National Inventory: Japan - ENCS
Status: Y
National Inventory: Korea - KECI
Status: Y
National Inventory: New Zealand - NZIoC
Status: Y
National Inventory: Philippines - PICCS
Status: Y
National Inventory: USA - TSCA
Status: Y

Legend:

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)

Poisons Schedule

S5

16. OTHER INFORMATION

User Codes

User Title Label	User Codes
Wis Numbers	04042013

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Other Information

Version No: 1.4

Safety Data Sheet according to WHS and ADG requirements

Details of the distributor of the safety data sheet:

Registered company name: WIS Solutions Pty Ltd

Address: Level 4, 26 Talavera Road, Macquarie Park

Telephone: +61-2-8873 4800

Fax: +61-2-8873 4935

Website: www.blackwoods.com.au

Email: wis.solutions@wisau.com.au

Ingredients with multiple cas numbers:

Name: sodium carbonate

CAS No: 497-19-8, 7542-12-3

Name: sodium tripolyphosphate

CAS No: 15091-98-2, 7758-29-4

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

This SDS has been transcribed into Infosafe GHS format from an original, issued by the manufacturer on the date shown. Any disclaimer by the manufacturer may not be included in the transcription.

END OF SDS

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