

# Oxygen Bleaching Powder

ACCO Brands Australia Pty Ltd

Version No: 1.3

Safety Data Sheet according to WHS and ADG requirements

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S.GHS.AUS.EN

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

### Product Identifier

|                               |                         |
|-------------------------------|-------------------------|
| Product name                  | Oxygen Bleaching Powder |
| Synonyms                      | Not Available           |
| Other means of identification | 10kg - 636091600        |

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

|                          |                   |
|--------------------------|-------------------|
| Relevant identified uses | Detergent booster |
|--------------------------|-------------------|

### Details of the supplier of the safety data sheet

|                         |  |
|-------------------------|--|
| Registered company name | ACCO Brands Australia Pty Ltd                        |
| Address                 | 17-19 Waterloo Street, Queanbeyan NSW 2620 Australia |
| Telephone               | +61-2-96740900                                       |
| Fax                     | +61-2-96740910                                       |
| Website                 | www.accobrand.com.au                                 |
| Email                   | sds.anz@acco.com                                     |

### Emergency telephone number

|                                   |                          |
|-----------------------------------|--------------------------|
| Association / Organisation        | Poisons Information Line |
| Emergency telephone numbers       | 13 11 26                 |
| Other emergency telephone numbers | Not Available            |


## SECTION 2 HAZARDS IDENTIFICATION

### Classification of the substance or mixture

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

|                               |   |
|-------------------------------|---|
| Poisons Schedule              | 5   |
| Classification <sup>[1]</sup> | Serious Eye Damage Category 1, Skin Corrosion/Irritation Category 1B, Acute Toxicity (Oral) Category 4, Acute Aquatic Hazard Category 3 |
| Legend:                       | 1. Classified by Chemwatch; 2. Classification drawn from HSIS ; 3. Classification drawn from EC Directive 1272/2008 - Annex VI          |

### Label elements

|                    |   |
|--------------------|---|
| GHS label elements |  |
|--------------------|---|

SIGNAL WORD **DANGER**

### Hazard statement(s)

|        |   |
|--------|---|
| H318   | Causes serious eye damage.                            |
| H314   | Causes severe skin burns and eye damage.              |
| H302   | Harmful if swallowed.                                 |
| H402   | Harmful to aquatic life                               |
| AUH066 | Repeated exposure may cause skin dryness and cracking |

### Precautionary statement(s) Prevention

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

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|             |  |
|-------------|--|
| <b>P280</b> | Wear protective gloves/protective clothing/eye protection/face protection. |
| <b>P270</b> | Do not eat, drink or smoke when using this product.                        |
| <b>P273</b> | Avoid release to the environment.  |

### Precautionary statement(s) Response

|                       |  |
|-----------------------|--|
| <b>P301+P330+P331</b> | IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.   |
| <b>P303+P361+P353</b> | IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.                       |
| <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. |
| <b>P310</b>           | Immediately call a POISON CENTER or doctor/physician.  |
| <b>P363</b>           | Wash contaminated clothing before reuse.   |
| <b>P301+P312</b>      | IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell.   |
| <b>P304+P340</b>      | IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.                                 |

### Precautionary statement(s) Storage

|             |                  |
|-------------|------------------|
| <b>P405</b> | Store locked up. |
|-------------|------------------|

### Precautionary statement(s) Disposal

|             |   |
|-------------|---|
| <b>P501</b> | Dispose of contents/container in accordance with local regulations. |
|-------------|---|

## SECTION 3 COMPOSITION / INFORMATION ON INGREDIENTS

### Substances

See section below for composition of Mixtures

### Mixtures

| CAS No     | %[weight] | Name                                       |
|------------|-----------|--|
| 497-19-8   | 51.5      | <u>sodium carbonate</u>                    |
| 7758-29-4  | 10        | <u>sodium tripolyphosphate</u>             |
| 5064-31-3  | 2         | <u>nitrotriacetic acid, trisodium salt</u> |
| 68439-50-9 | 2         | <u>alcohols C12-14 ethoxylated</u>         |
| 15630-89-4 | 25        | <u>sodium percarbonate</u>                 |
| 10213-79-3 | 9.5       | <u>sodium metasilicate, pentahydrate</u>   |

## 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>▶ Immediately hold eyelids apart and flush the eye continuously with 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>▶ Continue flushing until advised to stop by the Poisons Information Centre or a doctor, or for at least 15 minutes.</li> <li>▶ Transport to hospital or doctor without delay.</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 or hair contact occurs:</p> <ul style="list-style-type: none"> <li>▶ Immediately flush body and clothes with large amounts of water, using safety shower if available.</li> <li>▶ Quickly remove all contaminated clothing, including footwear.</li> <li>▶ Wash skin and hair with running water. Continue flushing with water until advised to stop by the Poisons Information Centre.</li> <li>▶ Transport to hospital, or doctor.</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>▶ For advice, contact a Poisons Information Centre or a doctor at once.</li> <li>▶ Urgent hospital treatment is likely to be needed.</li> <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>▶ Transport to hospital or doctor without delay.</li> </ul> |

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

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.

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### 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.

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]

Hydrogen peroxide at moderate concentrations (5% or more) is a strong oxidant.

- ▶ Direct contact with the eye is likely to cause corneal damage especially if not washed immediately. Careful ophthalmologic evaluation is recommended and the possibility of local corticosteroid therapy should be considered.
- ▶ Because of the likelihood of systemic effects attempts at evacuating the stomach via emesis induction or gastric lavage should be avoided.
- ▶ There is remote possibility, however, that a nasogastric or orogastric tube may be required for the reduction of severe distension due to gas formation"

Fisher Scientific SDS

## SECTION 5 FIREFIGHTING MEASURES

### Extinguishing media

- ▶ Water spray or fog.
- ▶ Foam.
- ▶ Dry chemical powder.
- ▶ BCF (where regulations permit).
- ▶ Carbon dioxide.

### 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 |
|-----------------------------|--|

### 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.</li> <li>▶ Prevent, by any means available, spillage from entering drains or water courses.</li> <li>▶ Use water delivered as a fine spray to control fire and cool adjacent area.</li> <li>▶ <b>DO NOT</b> approach containers suspected to be hot.</li> <li>▶ Cool fire exposed containers with water spray from a protected location.</li> <li>▶ If safe to do so, remove containers from path of fire.</li> <li>▶ Equipment should be thoroughly decontaminated after use.</li> </ul> |
| <b>Fire/Explosion Hazard</b> | Combustible. Will burn if ignited. Combustion products include; carbon monoxide (CO) carbon dioxide (CO <sub>2</sub> ) other pyrolysis products typical of burning organic material. May emit poisonous fumes. May emit corrosive fumes.   |

## SECTION 6 ACCIDENTAL RELEASE MEASURES

### Personal precautions, protective equipment and emergency procedures

|                     |   |
|---------------------|---|
| <b>Minor Spills</b> | <p>Environmental hazard - contain spillage.</p> <ul style="list-style-type: none"> <li>▶ Clean up waste regularly and abnormal spills immediately.</li> <li>▶ Avoid breathing dust and contact with skin and eyes.</li> <li>▶ Wear protective clothing, gloves, safety glasses and dust respirator.</li> <li>▶ Use dry clean up procedures and avoid generating dust.</li> <li>▶ Vacuum up or sweep up. <b>NOTE:</b> Vacuum cleaner must be fitted with an exhaust micro filter (HEPA type) (consider explosion-proof machines designed to be grounded during storage and use).</li> <li>▶ Dampen with water to prevent dusting before sweeping.</li> <li>▶ Place in suitable containers for disposal.</li> </ul> |
| <b>Major Spills</b> | <p>Environmental hazard - contain spillage.<br/>Moderate hazard.</p> <ul style="list-style-type: none"> <li>▶ <b>CAUTION:</b> Advise personnel in area.</li> <li>▶ Alert Emergency Services and tell them location and nature of hazard.</li> <li>▶ Control personal contact by wearing protective clothing.</li> <li>▶ Prevent, by any means available, spillage from entering drains or water courses.</li> <li>▶ Recover product wherever possible.</li> <li>▶ <b>IF DRY:</b> Use dry clean up procedures and avoid generating dust. Collect residues and place in sealed plastic bags or other containers for disposal.</li> </ul>  |

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>▶ 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>▶ Prevent concentration in hollows and sumps.</li> <li>▶ <b>DO NOT enter confined spaces until atmosphere has been checked.</b></li> <li>▶ <b>DO NOT allow material to contact humans, exposed food or food utensils.</b></li> <li>▶ Avoid contact with incompatible materials.</li> </ul> |
|----------------------|--|

Continued...

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|                          |   |
|--------------------------|---|
|                          | <ul style="list-style-type: none"> <li>▶ <b>When handling, DO NOT eat, drink or smoke.</b></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 area protected from environmental extremes.</li> <li>▶ Store away from incompatible materials and foodstuff containers.</li> <li>▶ Protect containers against physical damage and check regularly for leaks.</li> <li>▶ Observe manufacturer's storage and handling recommendations contained within this SDS.</li> </ul> <p>For major quantities:</p> <ul style="list-style-type: none"> <li>▶ Consider storage in banded areas - ensure storage areas are isolated from sources of community water (including stormwater, ground water, lakes and streams).</li> <li>▶ Ensure that accidental discharge to air or water is the subject of a contingency disaster management plan; this may require consultation with local authorities.</li> </ul> |

### Conditions for safe storage, including any incompatibilities

|                                |   |
|--------------------------------|---|
| <b>Suitable container</b>      | <ul style="list-style-type: none"> <li>▶ <b>DO NOT use aluminium or galvanised containers</b></li> <li>▶ Polyethylene or polypropylene container.</li> <li>▶ Check all containers are clearly labelled and free from leaks.</li> </ul>  |
| <b>Storage incompatibility</b> | <p>Hydrogen peroxide</p> <ul style="list-style-type: none"> <li>▶ is a powerful oxidiser</li> <li>▶ contamination or heat may cause self accelerating exothermic decomposition with oxygen gas and steam release - this may generate dangerous pressures - steam explosion.</li> <li>▶ reacts dangerously with rust, dust, dirt, iron, copper, acids, metals and salts, organic material.</li> <li>▶ is unstable if heated. (e.g): one volume of 70% hydrogen peroxide solution decomposes to produce 300 volumes of oxygen gas.</li> <li>▶ in presence of a strong initiating source may be explosively reactive</li> <li>▶ concentrated or pure material can generate heat and decompose spontaneously; can ignite or explode when heated, shocked, contaminated; or if placed in a basic (&gt;7) environment, especially in the presence of metal ions</li> <li>▶ mixtures with combustible materials may result in spontaneous combustion or may be impact- or heat- sensitive - evaporation or drying on towels or mop may cause a fire.</li> <li>▶ reacts violently with reducing agents, alcohols, ammonia, carboxylic acids, acetic acid, cobalt oxides, copper(II) chloride, ethers, metal powder, permanganates, acetone, benzenesulfonic anhydride, 1,1-dimethylhydrazine, dimethylphenylphosphine, gadolinium hydroxide, hydrogen selenide, iron oxides, lithium tetrahydroaluminate, magnesium tetrahydroaluminate, manganese(II) oxide, mercury oxide, methyl hydrazine, nickel monoxide, nitrogenous bases, osmium tetroxide, alpha-phenylselenoketones, phosphorus, phosphorus(V) oxide, quinoline, tetrahydrothiophene, tin(II) chloride, thiodiglycol, thiophane, tin(II) chloride, unsaturated organic compounds, readily oxidisable and combustible materials; avoid contact with combustibles including lubricants and graphite</li> <li>▶ reacts with cobalt, copper and its alloys, chromium, iridium, iron, lead, manganese, Monel, osmium, palladium, platinum, gold, silver, zinc, and other catalytic metals, metal oxides and salts - avoid metallic bowls and stirrers.</li> <li>▶ violent catalytic decomposition will occur in contact with certain metals such as iron, copper, chromium, brass, bronze, lead, silver, manganese or their salts.</li> <li>▶ forms unstable and possible explosive materials with acetic anhydride, aconitic acid, aniline, carboxylic acids, 1,4-diazabicyclo[2,2,2]octane, diphenyl diselenide, ethyl acetate, glycols, ketene, ketones, triethyltin hydroperoxide, 1,3,5-trioxane, vinyl acetate.</li> </ul> <p>Sodium carbonate:</p> <ul style="list-style-type: none"> <li>▶ aqueous solutions are strong bases</li> <li>▶ reacts violently with finely divided aluminium, fluorine, lithium, phosphorus pentoxide, sulfuric acid</li> <li>▶ reacts with fluorine gas at room temperature, generating incandescence.</li> <li>▶ 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</li> <li>▶ 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</li> <li>▶ attacks metal.</li> <li>▶ Inorganic peroxy compounds are potent oxidisers that pose fire or explosive hazards when in contact with ordinary combustible materials.</li> <li>▶ Inorganic peroxides react with organic compounds to generate organic peroxide and hydroperoxide products that react violently with reducing agents.</li> <li>▶ Inorganic oxidising agents can react with reducing agents to generate heat and products that may be gaseous (causing pressurization of closed containers). The products may themselves be capable of further reactions (such as combustion in the air).</li> <li>▶ Organic compounds in general have some reducing power and can in principle react with compounds in this class. Actual reactivity varies greatly with the identity of the organic compound.</li> <li>▶ Inorganic oxidising agents can react violently with active metals, cyanides, esters, and thiocyanates.</li> <li>▶ Peroxides, in contact with inorganic cobalt and copper compounds, iron and iron compounds, acetone, metal oxide salts and acids and bases can react with rapid, uncontrolled decomposition, leading to fires and explosions.</li> <li>▶ Inorganic reducing agents react with oxidizing agents to generate heat and products that may be flammable, combustible, or otherwise reactive. Their reactions with oxidizing agents may be violent.</li> <li>▶ Incidents involving interaction of active oxidants and reducing agents, either by design or accident, are usually very energetic and examples of so-called redox reactions.</li> <li>▶ In presence of moisture, the material is corrosive to aluminium, zinc and tin producing highly flammable hydrogen gas.</li> <li>▶ Avoid any contamination of this material as it is very reactive and any contamination is potentially hazardous</li> <li>▶ Avoid storage with reducing agents.</li> <li>▶ Avoid strong acids, acid chlorides, acid anhydrides and chloroformates.</li> <li>▶ Avoid contact with copper, aluminium and their alloys.</li> </ul> |

## SECTION 8 EXPOSURE CONTROLS / PERSONAL PROTECTION

### Control parameters

#### OCCUPATIONAL EXPOSURE LIMITS (OEL)

#### INGREDIENT DATA

Not Available

#### EMERGENCY LIMITS

| Ingredient                            | Material name                                      | TEEL-1     | TEEL-2    | TEEL-3    |
|---------------------------------------|--|------------|-----------|-----------|
| sodium carbonate                      | Sodium carbonate                                   | 12 mg/m3   | 130 mg/m3 | 780 mg/m3 |
| sodium tripolyphosphate               | Sodium tripolyphosphate                            | 0.22 mg/m3 | 2.5 mg/m3 | 620 mg/m3 |
| nitrilotriacetic acid, trisodium salt | Nitrilotriacetic acid, trisodium salt, monohydrate | 9.2 mg/m3  | 100 mg/m3 | 110 mg/m3 |


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|                                   |  |                      |                       |                       |
|-----------------------------------|--|----------------------|-----------------------|-----------------------|
| sodium metasilicate, pentahydrate | Sodium metasilicate pentahydrate       | 45 mg/m <sup>3</sup> | 45 mg/m <sup>3</sup>  | 170 mg/m <sup>3</sup> |
| sodium metasilicate, pentahydrate | Sodium silicate; (Sodium metasilicate) | 18 mg/m <sup>3</sup> | 230 mg/m <sup>3</sup> | 230 mg/m <sup>3</sup> |

| Ingredient                          | Original IDLH | Revised IDLH  |
|-------------------------------------|---------------|---------------|
| sodium carbonate                    | Not Available | Not Available |
| sodium tripolyphosphate             | Not Available | Not Available |
| nitrotriacetic acid, trisodium salt | Not Available | Not Available |
| alcohols C12-14 ethoxylated         | Not Available | Not Available |
| sodium percarbonate                 | Not Available | Not Available |
| sodium metasilicate, pentahydrate   | Not Available | Not Available |

### Exposure controls

|   |  |
|---|--|
| <b>Appropriate engineering controls</b> | <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. 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.</p> <p>Employers may need to use multiple types of controls to prevent employee overexposure.</p> <p>Local exhaust ventilation usually required.</p>   |
| <b>Personal protection</b>              |    |
| <b>Eye and face protection</b>          | <ul style="list-style-type: none"> <li>▶ 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.</li> <li>▶ Chemical goggles whenever there is a danger of the material coming in contact with the eyes; goggles must be properly fitted.</li> <li>▶ Full face shield (20 cm, 8 in minimum) may be required for supplementary but never for primary protection of eyes; these afford face protection.</li> <li>▶ Alternatively a gas mask may replace splash goggles and face shields.</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. 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.</li> </ul> |
| <b>Skin protection</b>                  | See Hand protection below  |
| <b>Hands/feet protection</b>            | ▶ Elbow length PVC gloves  |
| <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> <li>▶ Skin cleansing cream.</li> <li>▶ Eye wash unit.</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 |
|----------------|-----|
| NATURAL RUBBER | A   |
| NITRILE        | A   |

\* 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 A-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                      | A-AUS P2             | -                    | A-PAPR-AUS / Class 1 P2 |
| up to 50 x ES                      | -                    | A-AUS / Class 1 P2   | -                       |
| up to 100 x ES                     | -                    | A-2 P2               | A-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(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)

## SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

## Oxygen Bleaching Powder

### Information on basic physical and chemical properties

|   |                |  |                |
|---|----------------|--|----------------|
| <b>Appearance</b>                                   | A white powder |  |                |
| <b>Physical state</b>                               | Solid          | <b>Relative density (Water = 1)</b>            | 1.00           |
| <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 Available  |
| <b>pH (as supplied)</b>                             | Not Available  | <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 Available  |
| <b>Flash point (°C)</b>                             | Not Available  | <b>Taste</b>                                   | Not Available  |
| <b>Evaporation rate</b>                             | Not Available  | <b>Explosive properties</b>                    | Not Available  |
| <b>Flammability</b>                                 | Not Available  | <b>Oxidising properties</b>                    | Not Available  |
| <b>Upper Explosive Limit (%)</b>                    | Not Available  | <b>Surface Tension (dyn/cm or mN/m)</b>        | Not Applicable |
| <b>Lower Explosive Limit (%)</b>                    | Not Available  | <b>Volatile Component (%vol)</b>               | Not Available  |
| <b>Vapour pressure (kPa)</b>                        | Not Available  | <b>Gas group</b>                               | Not Available  |
| <b>Solubility in water (g/L)</b>                    | Miscible       | <b>pH as a solution (1%)</b>                   | 11-13          |
| <b>Vapour density (Air = 1)</b>                     | Not Available  | <b>VOC g/L</b>                                 | Not Available  |

### SECTION 10 STABILITY AND REACTIVITY

|   |  |
|---|--|
| <b>Reactivity</b>                         | See section 7  |
| <b>Chemical stability</b>                 | <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> |
| <b>Possibility of hazardous reactions</b> | See section 7  |
| <b>Conditions to avoid</b>                | See section 7  |
| <b>Incompatible materials</b>             | See section 7  |
| <b>Hazardous decomposition products</b>   | See section 5  |

### SECTION 11 TOXICOLOGICAL INFORMATION

#### Information on toxicological effects

|                     |   |
|---------------------|---|
| <b>Inhaled</b>      | <p>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. Inhalation of dusts, generated by the material during the course of normal handling, may be damaging to the health of the individual. 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.</p>  |
| <b>Ingestion</b>    | <p>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. 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. Inorganic polyphosphates are used extensively in domestic and industrial products. Experiments on rats showed kidney damage, growth retardation, and tetany due to low calcium.</p>  |
| <b>Skin Contact</b> | <p>The material can produce severe chemical burns following direct contact with the skin. 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. The material may cause mild but significant inflammation of the skin either following direct contact or after a delay of some time. Repeated exposure can cause contact dermatitis which is characterised by redness, swelling and blistering.</p>  |
| <b>Eye</b>          | <p>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.</p>   |
| <b>Chronic</b>      | <p>There has been concern that this material can cause cancer or mutations, but there is not enough data to make an assessment. 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. Long term inhalation of sodium carbonate may result in nose damage and lung disease. Prolonged or repeated skin contact may cause drying with cracking, irritation and possible dermatitis following.</p> |

|                                |                 |                   |
|--------------------------------|-----------------|-------------------|
| <b>Oxygen Bleaching Powder</b> | <b>TOXICITY</b> | <b>IRRITATION</b> |
|--------------------------------|-----------------|-------------------|

## Oxygen Bleaching Powder

|   |   |   |
|---|---|---|
|   | Not Available   | Not Available   |
| sodium carbonate                            | <b>TOXICITY</b>   | <b>IRRITATION</b>   |
|   | dermal (rat) LD50: >2000 mg/kg <sup>E[2]</sup>  | Eye (rabbit): 100 mg/24h moderate                                   |
|   | Inhalation (guinea pig) LC50: 0.8 mg/L/2h <sup>[2]</sup>  | Eye (rabbit): 100 mg/30s mild                                       |
|   | Inhalation (mouse) LC50: 1.2 mg/L/2h <sup>[2]</sup>   | Eye (rabbit): 50 mg SEVERE  |
|   | Inhalation (rat) LC50: 2.3 mg/L/2h <sup>[2]</sup>   | Skin (rabbit): 500 mg/24h mild                                      |
| Oral (rat) LD50: 2800 mg/kg <sup>d[2]</sup> |   |   |
| sodium tripolyphosphate                     | <b>TOXICITY</b>   | <b>IRRITATION</b>   |
|   | Dermal (rabbit) LD50: >3160 mg/kg <sup>[2]</sup>  | Nil reported  |
|   | Oral (rat) LD50: >2000 mg/kg <sup>[1]</sup>   |   |
| nitrotriacetic acid, trisodium salt         | <b>TOXICITY</b>   | <b>IRRITATION</b>   |
|   | Oral (rat) LD50: 300 mg/kg <sup>[1]</sup>   | * [BASF]  |
|   |   | Eye (rabbit): Irritant *<br>Skin (rabbit): non-irritating *         |
| alcohols C12-14 ethoxylated                 | <b>TOXICITY</b>   | <b>IRRITATION</b>   |
|   | Oral (rat) LD50: >8000 mg/kg <sup>***[2]</sup>  | Eye (rabbit): irritant *<br>Skin (rabbit): irritant *               |
| sodium percarbonate                         | <b>TOXICITY</b>   | <b>IRRITATION</b>   |
|   | Dermal (rabbit) LD50: >2000 mg/kg <sup>[1]</sup>  | Nil reported  |
|   | Oral (rat) LD50: 893 mg/kg <sup>[1]</sup>   |   |
| sodium metasilicate, pentahydrate           | <b>TOXICITY</b>   | <b>IRRITATION</b>   |
|   | Oral (rat) LD50: 847 mg/kg <sup>[2]</sup>   | Skin (human): 250 mg/24h SEVERE<br>Skin (rabbit): 250 mg/24h SEVERE |
| <b>Legend:</b>                              | 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 |   |

|                                |  |
|--------------------------------|--|
| <b>Oxygen Bleaching Powder</b> | <p>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. No significant acute toxicological data identified in literature search.</p> <p>for sodium carbonate:<br/>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.</p> <p>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 <i>in vitro</i> mutagenicity test with bacteria was negative and based on the structure of sodium carbonate no genotoxic effects are expected.</p> <p><b>WARNING:</b> This substance has been classified by the IARC as Group 2B: Possibly Carcinogenic to Humans.<br/>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.</p> |
| <b>SODIUM CARBONATE</b>        | <p>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.</p> <p>for sodium carbonate:<br/>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.</p> <p>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</p>   |

## Oxygen Bleaching Powder

|  |  |
|--|--|
|  | <p>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 <i>in vitro</i> mutagenicity test with bacteria was negative and based on the structure of sodium carbonate no genotoxic effects are expected.</p> <p>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.</p>   |
| <b>SODIUM TRIPOLYPHOSPHATE</b>               | <p>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.</p>  |
| <b>NITRILOTRIACETIC ACID, TRISODIUM SALT</b> | <p>Nitrilotriacetic acid and its water-soluble metal complexes occur in household detergents and drinking water. Their ability to chelate metal ions accounts for the toxicity. They may cause cancer of the kidney, bladder and urinary tract in some experimental animals but no foetal or genetic damage has been recorded. They do not cause skin sensitisation or irritation but may accumulate in the foetal skeleton.</p> <p>In humans, they are poorly absorbed from the intestines and rapidly excreted in the urine.</p> <p><b>WARNING:</b> This substance has been classified by the IARC as Group 2B: Possibly Carcinogenic to Humans.</p> <p>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.</p> |
| <b>ALCOHOLS C12-14 ETHOXYLATED</b>           | <p>Human beings have regular contact with alcohol ethoxylates through a variety of industrial and consumer products such as soaps, detergents, and other cleaning products. Exposure to these chemicals can occur through ingestion, inhalation, or contact with the skin or eyes. Studies of acute toxicity show that volumes well above a reasonable intake level would have to occur to produce any toxic response. Moreover, no fatal case of poisoning with alcohol ethoxylates has ever been reported. Multiple studies investigating the acute toxicity of alcohol ethoxylates have shown that the use of these compounds is of low concern in terms of oral and dermal toxicity.</p> <p>Clinical animal studies indicate these chemicals may produce gastrointestinal irritation such as ulcerations of the stomach, pilo-erection, diarrhea, and lethargy. Similarly, slight to severe irritation of the skin or eye was generated when undiluted alcohol ethoxylates were applied to the skin and eyes of rabbits and rats. The chemical shows no indication of being a genotoxin, carcinogen, or mutagen (HERA 2007).</p> <p>Both laboratory and animal testing has shown that there is no evidence for alcohol ethoxylates (AEs) causing genetic damage, mutations or cancer. No adverse reproductive or developmental effects were observed.</p> <p>The material may produce severe irritation to the eye causing pronounced inflammation. Repeated or prolonged exposure to irritants may produce conjunctivitis.</p> <p>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.</p> <p>* BASF Canada ** [Henkel CCINFO 1450373]</p>  |
| <b>SODIUM PERCARBONATE</b>                   | <p>No significant acute toxicological data identified in literature search.</p> <p>Sodium percarbonate is an inorganic, water soluble solid. It causes local irritation to mucous membranes, skin and eye. It is predicted to have genetic toxicity but may not cause cancer, reproductive, foetal, or developmental defects. However, there is insufficient data to substantiate this claim.</p>  |
| <b>SODIUM METASILICATE, PENTAHYDRATE</b>     | <p>The material may be irritating to the eye, with prolonged contact causing inflammation. Repeated or prolonged exposure to irritants may produce conjunctivitis.</p> <p>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.</p> <p>The material may produce respiratory tract irritation, and result in damage to the lung including reduced lung function.</p> <p>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.</p> <p>sodium metasilicate anhydrous:</p>   |

|  |   |                                 |   |
|--|---|---------------------------------|---|
| <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 required to make classification available  
⊘ – Data Not Available to make classification

## SECTION 12 ECOLOGICAL INFORMATION

### Toxicity

| Ingredient       | Endpoint | Test Duration (hr) | Species                       | Value    | Source |
|------------------|----------|--------------------|-------------------------------|----------|--------|
| sodium carbonate | EC50     | 48                 | Crustacea                     | =176mg/L | 1      |
| sodium carbonate | EC50     | 96                 | Algae or other aquatic plants | 242mg/L  | 4      |

Continued...



## Oxygen Bleaching Powder

|  |      |    |                               |                   |   |
|--|------|----|-------------------------------|-------------------|---|
| sodium carbonate                       | NOEC | 16 | Crustacea                     | 424mg/L           | 4 |
| sodium carbonate                       | LC50 | 96 | Fish                          | 300mg/L           | 2 |
| sodium carbonate                       | EC50 | 96 | Crustacea                     | 67mg/L            | 2 |
| sodium tripolyphosphate                | EC50 | 48 | Crustacea                     | >70.7- <101.3mg/L | 2 |
| sodium tripolyphosphate                | EC50 | 96 | Algae or other aquatic plants | 69.2mg/L          | 2 |
| nitriilotriacetic acid, trisodium salt | LC50 | 96 | Fish                          | <16.9-20.2mg/L    | 1 |
| nitriilotriacetic acid, trisodium salt | EC50 | 48 | Crustacea                     | 560- 1000mg/L     | 2 |
| nitriilotriacetic acid, trisodium salt | EC50 | 72 | Algae or other aquatic plants | >91.5mg/L         | 2 |
| nitriilotriacetic acid, trisodium salt | NOEC | 72 | Algae or other aquatic plants | 1.43mg/L          | 2 |
| alcohols C12-14 ethoxylated            | LC50 | 96 | Fish                          | 0.876mg/L         | 2 |
| alcohols C12-14 ethoxylated            | EC50 | 48 | Crustacea                     | 0.39mg/L          | 2 |
| alcohols C12-14 ethoxylated            | EC50 | 72 | Algae or other aquatic plants | 0.13mg/L          | 2 |
| alcohols C12-14 ethoxylated            | EC50 | 72 | Algae or other aquatic plants | 0.1341mg/L        | 2 |
| alcohols C12-14 ethoxylated            | NOEC | 72 | Algae or other aquatic plants | 0.0365mg/L        | 2 |
| sodium percarbonate                    | EC50 | 48 | Crustacea                     | =4.9mg/L          | 1 |
| sodium percarbonate                    | EC50 | 48 | Crustacea                     | 4.9mg/L           | 2 |
| sodium percarbonate                    | NOEC | 48 | Crustacea                     | 2mg/L             | 2 |
| sodium metasilicate, pentahydrate      | EC50 | 96 | Crustacea                     | 160mg/L           | 1 |
| sodium metasilicate, pentahydrate      | LC50 | 96 | Fish                          | 180mg/L           | 1 |
| sodium metasilicate, pentahydrate      | EC50 | 48 | Crustacea                     | 1700mg/L          | 2 |
| sodium metasilicate, pentahydrate      | EC50 | 72 | Algae or other aquatic plants | 207mg/L           | 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

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.

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.

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

**Persistence and degradability**

| Ingredient       | Persistence: Water/Soil | Persistence: Air |
|------------------|-------------------------|------------------|
| sodium carbonate | LOW                     | LOW              |

**Bioaccumulative potential**

| Ingredient       | Bioaccumulation        |
|------------------|------------------------|
| sodium carbonate | LOW (LogKOW = -0.4605) |

**Mobility in soil**

| Ingredient       | Mobility       |
|------------------|----------------|
| sodium carbonate | HIGH (KOC = 1) |

**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> </ul> |
|-------------------------------------|--|

Continued...

## Oxygen Bleaching Powder

- ▶ Where possible retain label warnings and SDS and observe all notices pertaining to the product.
- ▶ **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.

### 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**

#### 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)

#### NITRILOTRIACETIC ACID, TRISODIUM SALT(5064-31-3) IS FOUND ON THE FOLLOWING REGULATORY LISTS

Australia Hazardous Substances Information System - Consolidated Lists

Australia Inventory of Chemical Substances (AICS)

International Agency for Research on Cancer (IARC) - Agents Classified by the IARC Monographs

#### ALCOHOLS C12-14 ETHOXYLATED(68439-50-9) IS FOUND ON THE FOLLOWING REGULATORY LISTS

Australia Hazardous Substances Information System - Consolidated Lists

Australia Inventory of Chemical Substances (AICS)

#### SODIUM PERCARBONATE(15630-89-4) IS FOUND ON THE FOLLOWING REGULATORY LISTS

Australia Inventory of Chemical Substances (AICS)

#### SODIUM METASILICATE, PENTAHYDRATE(10213-79-3) IS FOUND ON THE FOLLOWING REGULATORY LISTS

Australia Hazardous Substances Information System - Consolidated Lists

Australia Inventory of Chemical Substances (AICS)

| National Inventory            | Status   |
|-------------------------------|--|
| Australia - AICS              | Y  |
| Canada - DSL                  | Y  |
| Canada - NDSL                 | N (sodium tripolyphosphate; sodium metasilicate, pentahydrate; alcohols C12-14 ethoxylated; nitriлотriacetic acid, trisodium salt; sodium percarbonate; sodium carbonate)                |
| China - IECSC                 | Y  |
| Europe - EINEC / ELINCS / NLP | Y  |
| Japan - ENCS                  | Y  |
| Korea - KECI                  | Y  |
| New Zealand - NZIoC           | Y  |
| Philippines - PICCS           | Y  |
| USA - TSCA                    | Y  |
| <b>Legend:</b>                | Y = All ingredients are on the inventory<br>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              |
|------------------|---------------------|
| sodium carbonate | 497-19-8, 7542-12-3 |

Continued...

## Oxygen Bleaching Powder

|                                       |                         |
|---------------------------------------|-------------------------|
| sodium tripolyphosphate               | 15091-98-2, 7758-29-4   |
| nitrilotriacetic acid, trisodium salt | 18662-53-8, 5064-31-3   |
| alcohols C12-14 ethoxylated           | 103819-01-8, 68439-50-9 |
| sodium percarbonate                   | 15630-89-4, 4452-58-8   |

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.

A list of reference resources used to assist the committee may be found at:

[www.chemwatch.net](http://www.chemwatch.net)

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

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