# MICROSHIELD 2 CHLORHEXIDINE SKIN CLEANSER

## Schulke New Zealand Ltd

Chemwatch Hazard Alert Code: **1**

Chemwatch: **60-3466**
Version No: **3.1.1.1**
Safety Data Sheet according to HSNO Regulations

Issue Date: **01/11/2019**
Print Date: **14/09/2020**
L.GHS.NZL.EN

## SECTION 1 Identification of the substance / mixture and of the company / undertaking

### Product Identifier

| | |
|---|---|
| **Product name** | MICROSHIELD 2 CHLORHEXIDINE SKIN CLEANSER |
| **Synonyms** | schulke code: 70000365, 70000361 |
| **Other means of identification** | Not Available |

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

| | |
|---|---|
| **Relevant identified uses** | Topical antiseptic skin, hand and preoperative body washing for external use.<br>SDS are intended for use in the workplace. For domestic-use products, refer to consumer labels. |

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

| | |
|---|---|
| **Registered company name** | **Schulke New Zealand Ltd** |
| **Address** | 14/188 Quay St Auckland 1010 New Zealand |
| **Telephone** | 0800 724 855 |
| **Fax** | Not Available |
| **Website** | www.schuelke.co.nz |
| **Email** | info.nz@schuelke.com |

### Emergency telephone number

| | |
|---|---|
| **Association / Organisation** | **NZ Poisons Centre** |
| **Emergency telephone numbers** | **0800 764 766** |
| **Other emergency telephone numbers** | **Not Available** |

## SECTION 2 Hazards identification

### Classification of the substance or mixture

**Considered a Hazardous Substance according to the criteria of the New Zealand Hazardous Substances New Organisms legislation. Not regulated for transport of Dangerous Goods.**

**ChemWatch Hazard Ratings**

| | Min | Max |
|---|---|---|
| Flammability | 0 | |
| Toxicity | 0 | |
| Body Contact | 1 | |
| Reactivity | 0 | |
| Chronic | 0 | |

0 = Minimum
1 = Low
2 = Moderate
3 = High
4 = Extreme

| | |
|---|---|
| **Classification [1]** | Skin Corrosion/Irritation Category 2, Serious Eye Damage Category 1, Skin Sensitizer Category 1, Specific target organ toxicity - repeated exposure Category 2, Chronic Aquatic Hazard Category 3 |
| ***Legend:*** | *1. Classified by Chemwatch; 2. Classification drawn from CCID EPA NZ; 3. Classification drawn from Regulation (EU) No 1272/2008 - Annex VI* |
| **Determined by Chemwatch using GHS/HSNO criteria** | 6.3A, 8.3A, 6.5B (contact), 6.9B, 9.1C |

### Label elements

| | |
|---|---|
| **Hazard pictogram(s)** |  |
| **Signal word** | **Danger** |

### Hazard statement(s)

**Page 1 continued...**

| | |
|---|---|
| **H315** | Causes skin irritation. |
| **H318** | Causes serious eye damage. |
| **H317** | May cause an allergic skin reaction. |
| **H373** | May cause damage to organs through prolonged or repeated exposure. |
| **H412** | Harmful to aquatic life with long lasting effects. |

**Supplementary statement(s)**

Not Applicable

**Precautionary statement(s) Prevention**

| | |
|---|---|
| **P260** | Do not breathe mist/vapours/spray. |
| **P280** | Wear protective gloves/protective clothing/eye protection/face protection. |
| **P273** | Avoid release to the environment. |
| **P272** | Contaminated work clothing should not be allowed out of the workplace. |

**Precautionary statement(s) Response**

| | |
|---|---|
| **P305+P351+P338** | IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. |
| **P310** | Immediately call a POISON CENTER/doctor/physician/first aider. |
| **P321** | Specific treatment (see advice on this label). |
| **P302+P352** | IF ON SKIN: Wash with plenty of water. |
| **P333+P313** | If skin irritation or rash occurs: Get medical advice/attention. |
| **P362+P364** | Take off contaminated clothing and wash it before reuse. |

**Precautionary statement(s) Storage**

Not Applicable

**Precautionary statement(s) Disposal**

| | |
|---|---|
| **P501** | Dispose of contents/container to authorised hazardous or special waste collection point in accordance with any local regulation. |

## SECTION 3 Composition / information on ingredients

**Substances**

See section below for composition of Mixtures

**Mixtures**

| CAS No | %[weight] | Name |
|---|---|---|
| 18472-51-0 | 2 | chlorhexidine gluconate |
| Not Available | 0-10 | ethoxylated alkylphenol |
| Not Available | | fatty acid diethanolamide, as |
| 68155-20-4 | <10 | tall oil fatty acids diethanolamide |
| 64-19-7 | <1 | acetic acid glacial |
| 9004-34-6 | <10 | cellulose |
| Not Available | <10 | fragrance |
| Not Available | <10 | dye |
| 7732-18-5 | >60 | water |

## SECTION 4 First aid measures

**Description of first aid measures**

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|---|---|
| **Eye Contact** | If this product comes in contact with the eyes:<br>▸ Wash out immediately with fresh running water.<br>▸ 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.<br>▸ Seek medical attention without delay; if pain persists or recurs seek medical attention.<br>▸ Removal of contact lenses after an eye injury should only be undertaken by skilled personnel. |
| **Skin Contact** | No adverse effects anticipated from normal use.<br>▸ Concentrate and diluted solution is readily removed with water.<br>▸ Abraded or broken skin should be washed carefully and thoroughly.<br>▸ Seek medical attention in event of irritation. |
| **Inhalation** | ▸ If fumes, aerosols or combustion products are inhaled remove from contaminated area.<br>▸ Other measures are usually unnecessary. |
| **Ingestion** | ▸ For advice, contact a Poisons Information Centre or a doctor.<br>▸ If swallowed do **NOT** induce vomiting.<br>▸ If vomiting occurs, lean patient forward or place on left side (head-down position, if possible) to maintain open airway and prevent aspiration.<br>▸ Observe the patient carefully.<br>▸ Never give liquid to a person showing signs of being sleepy or with reduced awareness; i.e. becoming unconscious<br>▸ Give water to rinse out mouth, then provide liquid slowly and as much as casualty can comfortably drink. |

**Continued...**

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| | ▸ Seek medical advice. |

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

Treat symptomatically.

## SECTION 5 Firefighting measures

**Extinguishing media**

The product contains a substantial proportion of water, therefore there are no restrictions on the type of extinguishing media which may be used. Choice of extinguishing media should take into account surrounding areas.
Though the material is non-combustible, evaporation of water from the mixture, caused by the heat of nearby fire, may produce floating layers of combustible substances.
In such an event consider:

- foam.
- dry chemical powder.
- carbon dioxide.

**Special hazards arising from the substrate or mixture**

| | |
|---|---|
| **Fire Incompatibility** | None known. |

**Advice for firefighters**

| | |
|---|---|
| **Fire Fighting** | ▸ Alert Fire Brigade and tell them location and nature of hazard.<br>▸ Wear breathing apparatus plus protective gloves in the event of a fire.<br>▸ Prevent, by any means available, spillage from entering drains or water courses.<br>▸ Use fire fighting procedures suitable for surrounding area.<br>▸ **DO NOT** approach containers suspected to be hot.<br>▸ Cool fire exposed containers with water spray from a protected location.<br>▸ If safe to do so, remove containers from path of fire.<br>▸ Equipment should be thoroughly decontaminated after use. |
| **Fire/Explosion Hazard** | ▸ Non combustible.<br>▸ Not considered to be a significant fire risk.<br>▸ Expansion or decomposition on heating may lead to violent rupture of containers.<br>▸ Decomposes on heating and may produce toxic fumes of carbon monoxide (CO).<br>▸ May emit acrid smoke.<br>Decomposition may produce toxic fumes of:<br>carbon dioxide ($CO_2$)<br>nitrogen oxides (NOx)<br>other pyrolysis products typical of burning organic material.<br>May emit poisonous fumes. |

## SECTION 6 Accidental release measures

**Personal precautions, protective equipment and emergency procedures**

See section 8

**Environmental precautions**

See section 12

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

| | |
|---|---|
| **Minor Spills** | Slippery when spilt.<br>▸ Clean up all spills immediately.<br>▸ Avoid breathing vapours and contact with skin and eyes.<br>▸ Control personal contact with the substance, by using protective equipment.<br>▸ Contain and absorb spill with sand, earth, inert material or vermiculite.<br>▸ Wipe up.<br>▸ Place in a suitable, labelled container for waste disposal. |
| **Major Spills** | Slippery when spilt.<br>Minor hazard.<br>▸ Clear area of personnel.<br>▸ Alert Fire Brigade and tell them location and nature of hazard.<br>▸ Control personal contact with the substance, by using protective equipment as required.<br>▸ Prevent spillage from entering drains or water ways.<br>▸ Contain spill with sand, earth or vermiculite.<br>▸ Collect recoverable product into labelled containers for recycling.<br>▸ Absorb remaining product with sand, earth or vermiculite and place in appropriate containers for disposal.<br>▸ Wash area and prevent runoff into drains or waterways.<br>▸ If contamination of drains or waterways occurs, advise emergency services. |

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

## SECTION 7 Handling and storage

**Precautions for safe handling**

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|---|---|
| **Safe handling** | ▸ Limit all unnecessary personal contact.<br>▸ Wear protective clothing when risk of exposure occurs.<br>▸ Use in a well-ventilated area.<br>▸ When handling **DO NOT** eat, drink or smoke.<br>▸ Always wash hands with soap and water after handling.<br>▸ Avoid physical damage to containers. |

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| | |
|---|---|
| | ▸ Use good occupational work practice.<br>▸ Observe manufacturer's storage and handling recommendations contained within this SDS. |
| **Other information** | ▸ Store in original containers.<br>▸ Keep containers securely sealed.<br>▸ Store in a cool, dry, well-ventilated area.<br>▸ Store away from incompatible materials and foodstuff containers.<br>▸ Protect containers against physical damage and check regularly for leaks.<br>▸ Observe manufacturer's storage and handling recommendations contained within this SDS. |

### Conditions for safe storage, including any incompatibilities

| | |
|---|---|
| **Suitable container** | ▸ Lined metal can, lined metal pail/ can.<br>▸ Plastic pail.<br>▸ Polyliner drum.<br>▸ Packing as recommended by manufacturer.<br>▸ Check all containers are clearly labelled and free from leaks. |
| **Storage incompatibility** | None known |

## SECTION 8 Exposure controls / personal protection

### Control parameters

**Occupational Exposure Limits (OEL)**

**INGREDIENT DATA**

| Source | Ingredient | Material name | TWA | STEL | Peak | Notes |
|---|---|---|---|---|---|---|
| New Zealand Workplace Exposure Standards (WES) | acetic acid glacial | Acetic acid | 10 ppm / 25 mg/m3 | 37 mg/m3 / 15 ppm | Not Available | Not Available |
| New Zealand Workplace Exposure Standards (WES) | cellulose | Cellulose (paper fibre) | 10 mg/m3 | Not Available | Not Available | Not Available |

**Emergency Limits**

| Ingredient | Material name | TEEL-1 | TEEL-2 | TEEL-3 |
|---|---|---|---|---|
| acetic acid glacial | Acetic acid | Not Available | Not Available | Not Available |

| Ingredient | Original IDLH | Revised IDLH |
|---|---|---|
| chlorhexidine gluconate | Not Available | Not Available |
| tall oil fatty acids diethanolamide | Not Available | Not Available |
| acetic acid glacial | 50 ppm | Not Available |
| cellulose | Not Available | Not Available |
| water | Not Available | Not Available |

**Occupational Exposure Banding**

| Ingredient | Occupational Exposure Band Rating | Occupational Exposure Band Limit |
|---|---|---|
| chlorhexidine gluconate | E | ≤ 0.1 ppm |
| tall oil fatty acids diethanolamide | E | ≤ 0.1 ppm |
| ***Notes:*** | *Occupational exposure banding is a process of assigning chemicals into specific categories or bands based on a chemical's potency and the adverse health outcomes associated with exposure. The output of this process is an occupational exposure band (OEB), which corresponds to a range of exposure concentrations that are expected to protect worker health.* | |

**MATERIAL DATA**

### Exposure controls

**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.

General exhaust is adequate under normal operating conditions. If risk of overexposure exists, wear SAA approved respirator. Correct fit is essential to obtain adequate protection. Provide adequate ventilation in warehouse or closed storage areas. Air contaminants generated in the workplace possess varying "escape" velocities which, in turn, determine the "capture velocities" of fresh circulating air required to effectively remove the contaminant.

| Type of Contaminant: | Air Speed: |
|---|---|
| solvent, vapours, degreasing etc., evaporating from tank (in still air) | 0.25-0.5 m/s (50-100 f/min) |
| aerosols, fumes from pouring operations, intermittent container filling, low speed conveyer transfers, welding, spray drift, plating acid fumes, pickling (released at low velocity into zone of active generation) | 0.5-1 m/s (100-200 f/min.) |
| direct spray, spray painting in shallow booths, drum filling, conveyer loading, crusher dusts, gas discharge (active generation into zone of rapid air motion) | 1-2.5 m/s (200-500 f/min) |
| grinding, abrasive blasting, tumbling, high speed wheel generated dusts (released at high initial velocity into zone of very high rapid air motion). | 2.5-10 m/s (500-2000 f/min.) |

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|---|---|
| | Within each range the appropriate value depends on:<br><br>Lower end of the range / Upper end of the range<br>1: Room air currents minimal or favourable to capture / 1: Disturbing room air currents<br>2: Contaminants of low toxicity or of nuisance value only / 2: Contaminants of high toxicity<br>3: Intermittent, low production. / 3: High production, heavy use<br>4: Large hood or large air mass in motion / 4: Small hood - local control only<br><br>Simple theory shows that air velocity falls rapidly with distance away from the opening of a simple extraction pipe. Velocity generally decreases with the square of distance from the extraction point (in simple cases). Therefore the air speed at the extraction point should be adjusted, accordingly, after reference to distance from the contaminating source. The air velocity at the extraction fan, for example, should be a minimum of 1-2 m/s (200-400 f/min.) for extraction of solvents generated in a tank 2 meters distant from the extraction point. Other mechanical considerations, producing performance deficits within the extraction apparatus, make it essential that theoretical air velocities are multiplied by factors of 10 or more when extraction systems are installed or used. |
| **Personal protection** |  |
| **Eye and face protection** | No special equipment for minor exposure i.e. when handling small quantities.<br>OTHERWISE:<br>▸ Safety glasses with side shields.<br>▸ 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. In the event of chemical exposure, begin eye irrigation immediately and remove contact lens as soon as practicable. Lens should be removed at the first signs of eye redness or irritation - lens should be removed in a clean environment only after workers have washed hands thoroughly. [CDC NIOSH Current Intelligence Bulletin 59], [AS/NZS 1336 or national equivalent] |
| **Skin protection** | See Hand protection below |
| **Hands/feet protection** | No special equipment needed when handling small quantities.<br>**OTHERWISE**: Wear general protective gloves, e.g. light weight rubber gloves. |
| **Body protection** | See Other protection below |
| **Other protection** | No special equipment needed when handling small quantities<br>**OTHERWISE:**<br>▸ Overalls<br>▸ Eyewash unit. |

### 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:
MICROSHIELD 2 SKIN CLEANSER

| Material | CPI |
|---|---|
| BUTYL | A |
| NEOPRENE | A |
| BUTYL/NEOPRENE | C |
| NAT+NEOPR+NITRILE | C |
| NATURAL RUBBER | C |
| NATURAL+NEOPRENE | C |
| NITRILE | C |
| NITRILE+PVC | C |
| PE | C |
| PE/EVAL/PE | C |
| PVA | C |
| PVC | C |
| SARANEX-23 | C |
| TEFLON | C |
| VITON | C |

* CPI - Chemwatch Performance Index
A: Best Selection
B: Satisfactory; may degrade after 4 hours continuous immersion
C: Poor to Dangerous Choice for other than short term immersion
**NOTE**: As a series of factors will influence the actual performance of the glove, a final selection must be based on detailed observation. -
* Where the glove is to be used on a short term, casual or infrequent basis, factors such as "feel" or convenience (e.g. disposability), may dictate a choice of gloves which might otherwise be unsuitable following long-term or frequent use. A qualified practitioner should be consulted.

### Respiratory protection

Type ABK-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 | ABK-AUS P3 | - | ABK-PAPR-AUS / Class 1 P3 |
| up to 50 x ES | - | ABK-AUS / Class 1 P3 | - |
| up to 100 x ES | - | ABK-2 P3 | ABK-PAPR-2 P3 ^ |

^ - 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)

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## SECTION 9 Physical and chemical properties

### Information on basic physical and chemical properties

| | |
|---|---|
| **Appearance** | Pale green viscous liquid with a cologne fragrance; mixes with water. |

| | | | |
|---|---|---|---|
| **Physical state** | Liquid | **Relative density (Water = 1)** | 1.01 |
| **Odour** | Not Available | **Partition coefficient n-octanol / water** | Not Available |
| **Odour threshold** | Not Available | **Auto-ignition temperature (°C)** | Not available. |
| **pH (as supplied)** | 5.5 | **Decomposition temperature** | Not Available |
| **Melting point / freezing point (°C)** | Not Available | **Viscosity (cSt)** | Not Available |
| **Initial boiling point and boiling range (°C)** | Not Available | **Molecular weight (g/mol)** | Mixture |
| **Flash point (°C)** | Not Applicable | **Taste** | Not Available |
| **Evaporation rate** | Not Available | **Explosive properties** | Not Available |
| **Flammability** | Not Applicable | **Oxidising properties** | Not Available |
| **Upper Explosive Limit (%)** | Not Applicable | **Surface Tension (dyn/cm or mN/m)** | Not Available |
| **Lower Explosive Limit (%)** | Not Applicable | **Volatile Component (%vol)** | Not Available |
| **Vapour pressure (kPa)** | Not Available | **Gas group** | Not Available |
| **Solubility in water** | Miscible | **pH as a solution (1%)** | Not available. |
| **Vapour density (Air = 1)** | Not Available | **VOC g/L** | Not Available |

## SECTION 10 Stability and reactivity

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|---|---|
| **Reactivity** | See section 7 |
| **Chemical stability** | Product is considered stable and hazardous polymerisation will not occur. |
| **Possibility of hazardous reactions** | See section 7 |
| **Conditions to avoid** | See section 7 |
| **Incompatible materials** | See section 7 |
| **Hazardous decomposition products** | See section 5 |

## SECTION 11 Toxicological information

### Information on toxicological effects

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|---|---|
| **Inhaled** | Not normally a hazard due to non-volatile nature of product<br>The material is not thought to produce adverse health effects or irritation of the respiratory tract (as classified by EC Directives using animal models). Nevertheless, good hygiene practice requires that exposure be kept to a minimum and that suitable control measures be used in an occupational setting. |
| **Ingestion** | The liquid is mildly discomforting<br>Ingestion may result in nausea, abdominal irritation, pain and vomiting |
| **Skin Contact** | Not considered to cause discomfort through normal use.<br>Discontinue use if irritation occurs |
| **Eye** | The material may be irritating to the eye, with prolonged contact causing inflammation. Repeated or prolonged exposure to irritants may produce conjunctivitis. |
| **Chronic** | Chronic ingestion of chlorhexidine can result in liver and kidney damage.<br>There exists limited evidence that shows that skin contact with the material is capable either of inducing a sensitisation reaction in a significant number of individuals, and/or of producing positive response in experimental animals. |

| | | |
|---|---|---|
| **MICROSHIELD 2 SKIN CLEANSER** | **TOXICITY** | **IRRITATION** |
| | Not Available | Not Available |
| **chlorhexidine gluconate** | **TOXICITY** | **IRRITATION** |
| | 25 mg/kg[2] | Not Available |
| | Oral (rat) LD50: 2000 mg/kg[2] | |
| **tall oil fatty acids diethanolamide** | **TOXICITY** | **IRRITATION** |
| | Not Available | Not Available |
| **acetic acid glacial** | **TOXICITY** | **IRRITATION** |
| | Dermal (rabbit) LD50: 1060 mg/kg[2] | Eye (rabbit): 0.05mg (open)-SEVERE |
| | Oral (rat) LD50: 3310 mg/kg[2] | Skin (human):50mg/24hr - mild |
| | | Skin (rabbit):525mg (open)-SEVERE |

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|---|---|
| **cellulose** | **TOXICITY** / **IRRITATION**<br>Dermal (rabbit) LD50: >2000 mg/kg[2] / Not Available<br>Inhalation (rat) LC50: >5.8 mg/l/4H[2]<br>Oral (rat) LD50: >5000 mg/kg[2] |
| **water** | **TOXICITY** / **IRRITATION**<br>Oral (rat) LD50: >90000 mg/kg[2] / Not Available |
| ***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* |

| | |
|---|---|
| **CHLORHEXIDINE GLUCONATE** | In acute toxicity studies using laboratory animals, chlorhexidine diacetate is mildly to moderately toxic when administered by inhalation, oral and dermal routes. However, in repeat primary eye irritation studies, the chemical is severely toxic.<br>In a subchronic dermal rabbit toxicity study systemic effects included degenerative changes in the livers of females. In a developmental toxicity study in rats, no observable malformations nor signs of developmental toxicity were found at any dose level tested.<br>A battery of mutagenicity studies were negative for mutagenic effects. |
| **TALL OIL FATTY ACIDS DIETHANOLAMIDE** | The material may cause skin irritation after prolonged or repeated exposure and may produce a contact dermatitis (nonallergic). This form of dermatitis is often characterised by skin redness (erythema) and swelling epidermis. Histologically there may be intercellular oedema of the spongy layer (spongiosis) and intracellular oedema of the epidermis.<br>for diethanolamine (DEA):<br>In animal studies, DEA has low acute toxicity via the oral and dermal routes with moderate skin irritation and severe eye irritation. In subchronic toxicity testing conducted via the oral route in rats and mice, the main effects observed were increased organ weights and histopathology of the kidney and/or liver, with the majority of other tissue effects noted only at relatively high dosages. In subchronic studies conducted via the dermal route, skin irritation was noted as well as systemic effects similar to those observed in the oral studies. DEA has not been shown to be mutagenic or carcinogenic in rats; however, there is evidence of its carcinogenicity in mice.<br>**Subchronic toxicity:** The subchronic toxicity of DEA has been studied in F344 rats and B6C3F1 mice by exposure through drinking water or dermal administration, in 2 week and 13 week studies.<br>Target organs for toxicity included blood, kidney, brain and spinal cord, seminiferous tubules and dermal application site in rats and liver, kidney, heart, salivary gland and dermal application site in mice. Effects on seminiferous tubules were accompanied by reductions in sperm count and reduced sperm motility Hematological evaluations indicated normochromic, microcytic anemia in the dermal study in male rats (NOEL =32 mg/g) and females (LOEL = 32 mg/kg). Anemia was also observed in rats in the drinking water study with a LOEL of 14 mg/kg/d in females and a LOEL of 48 mg/kg/d in males for altered hematological parameters. These findings were similar to those observed in the 2 week studies, but the magnitude of the changes was greater in the 13 week studies. Hematological parameters were normal in controls. No associated histopathological changes were noted in femoral bone marrow. Haematological parameters were not evaluated in mice.<br>**Developmental toxicity**: In a developmental toxicity study conducted via the oral route, effects of concern were observed only in the presence of maternal toxicity. In a developmental toxicity study conducted via the dermal route using two species of mammals, developmental toxicity was observed only in one species and only at doses causing significant maternal toxicity. Metabolically, DEA is excreted largely unchanged in the urine.<br>**Carcinogenicity**: A two-year dermal cancer study bioassay results on DEA and three fatty acid condensates of DEA indicated that liver tumours occurred in male and female mice exposed to DEA and two of the condensates. In addition kidney tumours occurred in male mice exposed to DEA and one of the condensates. Compelling evidence suggested that the toxicity observed in mice and rats treated with the DEA condensates was associated with free DEA and not with other components of the condensates. A weight of evidence analysis of data relevant to the assessment of the liver and kidney tumours in mice resulted in the conclusion that these tumours are not relevant to humans under the expected conditions of exposure and that liver and kidney toxicity should be evaluated on a threshold basis. This conclusion is based on the following:<br>▸ DEA is not genotoxic<br>▸ tumour development occurred at doses also associated with chronic hyperplasia<br>▸ there was no dose-related increase in malignancy, multiplicity of tumours or decrease in latency period<br>▸ tumours occurred late in life<br>▸ tumour response was species-specific (only mice were affected, not rats)<br>▸ tumour response was sex-specific (only male mice were affected, not females)<br>▸ tumour development was site-specific, with only liver and kidney affected, both sites of DEA accumulation;<br>▸ there was no tumour response in skin, despite evidence of chronic dermal toxicity<br>▸ there is a plausible mechanism, supported by various data, to explain the renal toxicity of DEA<br>▸ data support threshold mechanisms of renal carcinogenesis for a number of non-genotoxic chemicals<br>▸ the exposure regime used in the mouse study (*i.e.*, lifetime continuous exposure to DEA in ethanol vehicle at doses causing chronic dermal toxicity) is not relevant to human exposure (exposure through cosmetic vehicles with daily removal, under non-irritating conditions).<br>In considering the aggregate data on a DEA basis from the four studies using DEA and related condensates, the NOEL for kidney toxicity was 19 mg/kg/d, which resulted from a dose of 100 mg/kg/d of cocamide DEA containing 19% free DEA.<br>**Anaemia:** Rats exposed to DEA condensates developed anaemia. This was considered to be of to be relevant for humans since anaemia in rodents and humans share common etiologies. The proposed mechanism by which DEA could cause anemia involves disruption of phospholipid metabolism leading to membrane perturbation and functional change to erythrocytes. Some doubt about the relevance of the findings arises because ethanol was used as the vehicle in the dermal studies, and ethanol is known to cause anaemia in rodents through a mechanism involving membrane disruption. The possibility of a synergistic or additive role for DEA and ethanol in combination cannot be ruled out.<br>In considering the aggregate data on a DEA basis from the four 13-week dermal studies using DEA and related condensates, the NOEL for microcytic anemia was 9.5 mg/kg/d, which resulted from a dose of 50 mg/kg/d of cocamide DEA containing 19% free DEA.<br>The NOELs for mice and rats derived in this hazard assessment were as follows:<br>Anaemia in rats: 9.5 mg/kg/d (based on microcytic anemia)<br>Organ toxicity in mice: 2.2 mg/kg/d (based on liver toxicity)<br>In extrapolating among species for the purposes of risk assessment, the prime consideration with respect to dermally applied DEA was differential dermal absorption. Evidence indicates that dermal penetration of<br>DEA is greatest in mice and lower in rats and humans. Interspecies extrapolation was accomplished in this assessment by converting applied doses to bioavailable doses (*i.e.*, internal doses) using dermal bioavailability determined in studies with rats and mice *in vivo*, so as to be able to compare these with internal doses expected to be experienced by humans through use of personal care products.<br>Based on measured bioavailability in mice and rats, the bioavailable NOELs corresponding to the foregoing were:<br>Anaemia in rats: 0.8 mg/kg/d (based on microcytic anemia)<br>Organ toxicity in mice: 0.55 mg/kg/d (based on liver toxicity)<br>**Kidney toxicity:** Effects on the kidney were observed in rats treated with DEA in drinking water or by dermal exposure after as little as 2 weeks of exposure. Effects included renal tubule hyperplasia, renal tubular epithelial necrosis, renal tubule mineralization and increased relative organ weight. Similar changes were observed after 13 weeks of exposure of rats to DEA in drinking water and by dermal administration. The NOEL in male rats was 250 mg/kg/d in the dermal study, while in female rats renal tubule mineralisation was observed at the lowest dose of 32 mg/kg/d. After 2 years of dermal exposure there were no histopathological changes in the kidneys of male rats given doses of up to 64 mg/kg/d. In females, there were no significant increases in the incidences of renal tubule epithelial necrosis, hyperplasia or mineralisation as was observed after 13 weeks of exposure, however, there was an increase in the severity and incidence of nephropathy. This was the result of a treatment- |

**Continued...**

related exacerbation of a previously existing lesion, since the incidence in controls was 80%, increasing to 94-96% in treated groups. There was no significant increase in the incidence of kidney tumours in rats treated with DEA or any of the condensates in 2-year dermal studies.
**Liver toxicity:** Effects on liver, including increases in relative organ weight and histopathological changes were observed in male and female mice in the 2 week drinking water study with DEA. Increases in liver weight were observed in the two week dermal study, but were not associated with histopathological changes. After 13 weeks of exposure, relative liver weights were increased compared to controls in male and female rats, with no associated histopathology. There is some doubt about whether these changes in liver weights were of toxicological significance, since there was no associated histopathology, the dose-response was not consistent and there were no effects on liver in the 2 year study in rats.
In the study with coconut diethanolamide (CDEA) (100 and 200 mg/kg/d) in which 19% of the applied dose was DEA, there were no liver effects in rats after 13 weeks or 2 years of dermal exposure. No liver toxicity in rats was observed in the 2 year dermal studies of lauramide or oleamide DEA

Fatty acid amides (FAA) are ubiquitous in household and commercial environments. The most common of these are based on coconut oil fatty acids alkanolamides. These are the most widely studied in terms of human exposure.

Fatty acid diethanolamides (C8-C18) are classified by Comite Europeen des Agents de Surface et de leurs Intermediaires Organiques (CESIO) as Irritating (Xi) with the risk phrases R38 (Irritating to skin) and R41 (Risk of serious damage to eyes). Fatty acid monoethanolamides are classified as Irritant (Xi) with the risk phrases R41

Several studies of the sensitization potential of cocoamide diethanolamide (DEA) indicate that this FAA induces occupational allergic contact dermatitis and a number of reports on skin allergy patch testing of cocoamide DEA have been published. These tests indicate that allergy to cocoamide DEA is becoming more common.

Alkanolamides are manufactured by condensation of diethanolamine and the methylester of long chain fatty acids. Several alkanolamides (especially secondary alkanolamides) are susceptible to nitrosamine formation which constitutes a potential health problem. Nitrosamine contamination is possible either from pre-existing contamination of the diethanolamine used to manufacture cocoamide DEA, or from nitrosamine formation by nitrosating agents in formulations containing cocoamide DEA. According to the Cosmetic Directive (2000) cocoamide DEA must not be used in products with nitrosating agents because of the risk of formation of N-nitrosamines. The maximum content allowed in cosmetics is 5% fatty acid dialkanolamides, and the maximum content of N-nitrosodialkanolamines is 50 mg/kg. The preservative 2-bromo-2-nitropropane-1,3-diol is a known nitrosating agent for secondary and tertiary amines or amides. Model assays have indicated that 2-bromo-2-nitropropane-1,3-diol may lead to the N-nitrosation of diethanolamine forming the carcinogenic compound, N-nitrosodiethanolamine which is a potent liver carcinogen in rats (IARC 1978).

Several FAAs have been tested in short-term genotoxicity assays. No indication of any potential to cause genetic damage was seen Lauramide DEA was tested in mutagenicity assays and did not show mutagenic activity in *Salmonella typhimurium* strains or in hamster embryo cells. Cocoamide DEA was not mutagenic in strains of *Salmonella typhimurium* when tested with or without metabolic activation

Environmental and Health Assessment of Substances in Household Detergents and Cosmetic Detergent Products, Environment Project, 615, 2001. Miljoministeriet (Danish Environmental Protection Agency)

For Fatty Nitrogen Derived (FND) Amides (including several high molecular weight alkyl amino acid amides)
The chemicals in the Fatty Nitrogen Derived (FND) Amides of surfactants are similar to the class in general as to physical/chemical properties, environmental fate and toxicity. Human exposure to these chemicals is substantially documented.
The Fatty nitrogen-derived amides (FND amides) comprise four categories:
Subcategory I: Substituted Amides
Subcategory II: Fatty Acid Reaction Products with Amino Compounds (Note: Subcategory II chemicals, in many cases, contain Subcategory I chemicals as major components)
Subcategory III: Imidazole Derivatives
Subcategory IV: FND Amphoterics
Acute Toxicity: The low acute oral toxicity of the FND Amides is well established across all Subcategories by the available data. The limited acute toxicity of these chemicals is also confirmed by four acute dermal and two acute inhalation studies.
Repeated Dose and Reproductive Toxicity: Two subchronic toxicity studies demonstrating low toxicity are available for Subcategory I chemicals. In addition, a 5-day repeated dose study for a third chemical confirmed the minimal toxicity of these chemicals. Since the Subcategory I chemicals are major components of many Subcategory II chemicals, and based on the low repeat-dose toxicity of the amino compounds (e.g. diethanolamine, triethanolamine) used for producing the Subcategory II derivatives, the Subcategory I repeat-dose toxicity studies adequately support Subcategory II.
Two subchronic toxicity studies in Subcategory III confirmed the low order of repeat dose toxicity for the FND Amides Imidazole derivatives. For Subcategory IV, two subchronic toxicity studies for one of the chemicals indicated a low order of repeat-dose toxicity for the FND amphoteric salts similar to that seen in the other categories.
Genetic Toxicity in vitro: Based on the lack of effect of one or more chemicals in each subcategory, adequate data for mutagenic activity as measured by the Salmonella reverse mutation assay exist for all of the subcategories.
Developmental Toxicity: A developmental toxicity study in Subcategory I and in Subcategory IV and a third study for a chemical in Subcategory III are available. The studies indicate these chemicals are not developmental toxicants, as expected based on their structures, molecular weights, physical properties and knowledge of similar chemicals. As above for repeat-dose toxicity, the data for Subcategory I are adequate to support Subcategory II.
In evaluating potential toxicity of the FND Amides chemicals, it is also useful to review the available data for the related FND Cationic and FND Amines Category chemicals. Acute oral toxicity studies (approximately 80 studies for 40 chemicals in the three categories) provide LD50 values from approximately 400 to 10,000 mg/kg with no apparent organ specific toxicity. Similarly, repeated dose toxicity studies (approximately 35 studies for 15 chemicals) provide NOAELs between 10 and 100 mg/kg/day for rats and slightly lower for dogs. More than 60 genetic toxicity studies (in vitro bacterial and mammalian cells as well as in vivo studies) indicated no mutagenic activity among more than 30 chemicals tested. For reproductive evaluations, 14 studies evaluated reproductive endpoints and/or reproductive organs for 11 chemicals, and 15 studies evaluated developmental toxicity for 13 chemicals indicating no reproductive or developmental effects for the FND group as a whole.
Some typical applications of FND Amides are:
masonry cement additive; curing agent for epoxy resins; closed hydrocarbon systems in oil field production, refineries and chemical plants; and slip and antiblocking additives for polymers.
The safety of the FND Amides to humans is recognised by the U.S. FDA, which has approved stearamide, oleamide and/or erucamide for adhesives; coatings for articles in food contact; coatings for polyolefin films; defoaming agents for manufacture of paper and paperboard; animal glue (defoamer in food packaging); in EVA copolymers for food packaging; lubricants for manufacture of metallic food packaging; irradiation of prepared foods; release agents in manufacture of food packaging materials, food contact surface of paper and paperboard; cellophane in food packaging; closure sealing gaskets; and release agents in polymeric resins and petroleum wax. The low order of toxicity indicates that the use of FND Amides does not pose a significant hazard to human health.
The differences in chain length, degree of saturation of the carbon chains, source of the natural oils, or addition of an amino group in the chain would not be expected to have an impact on the toxicity profile. This conclusion is supported by a number of studies in the FND family of chemicals (amines, cationics, and amides as separate categories) that show no differences in the length or degree of saturation of the alkyl substituents and is also supported by the limited toxicity of these long-chain substituted chemicals.

**Continued...**

| | |
|---|---|
| **ACETIC ACID GLACIAL** | for acid mists, aerosols, vapours<br>Data from assays for genotoxic activity in vitro suggest that eukaryotic cells are susceptible to genetic damage when the pH falls to about 6.5. Cells from the respiratory tract have not been examined in this respect. Mucous secretion may protect the cells of the airways from direct exposure to inhaled acidic mists, just as mucous plays an important role in protecting the gastric epithelium from its auto-secreted hydrochloric acid. In considering whether pH itself induces genotoxic events in vivo in the respiratory system, comparison should be made with the human stomach, in which gastric juice may be at pH 1-2 under fasting or nocturnal conditions, and with the human urinary bladder, in which the pH of urine can range from <5 to > 7 and normally averages 6.2. Furthermore, exposures to low pH in vivo differ from exposures *in vitro* in that, *in vivo*, only a portion of the cell surface is subjected to the adverse conditions, so that perturbation of intracellular homeostasis may be maintained more readily than in vitro.<br>The material may produce severe skin irritation after prolonged or repeated exposure, and may produce a contact dermatitis (nonallergic). This form of dermatitis is often characterised by skin redness (erythema) thickening of the epidermis.<br>Histologically there may be intercellular oedema of the spongy layer (spongiosis) and intracellular oedema of the epidermis. Prolonged contact is unlikely, given the severity of response, but repeated exposures may produce severe ulceration.<br>NOAELs following repeated exposure to acetic acid and its salts range from 210 mg/kg bw/day (2-4 month acetic acid drinking water study; systemic toxicity) to 3600 mg/kg bw/day (acetic acid, sodium salt, 4 week dietary study; no effects reported). Signs of irritation/corrosion at the site of contact as well as systemic toxicity have been reported. Prolonged inhalation exposure to acetic acid results in muscle imbalance, increase in blood cholinesterase activity, decreases in albumins and decreased growth at concentrations greater than 0.01 mg/m3/day.<br>Groups of 20 mice/sex were given 0.025% sodium acetate in drinking water (about 60 mg/kg bw/day) for 1 week before breeding, during a 9-day breeding period and (females only) throughout pregnancy, lactation and until the offspring were weaned at 3 weeks of age. No effects on fertility were observed. The male offspring were given the same solution until they were 5-7 weeks old and were then examined in a 24-hour activity test. Examination of the litters revealed no overt deformities and normal pup weights at day 1 and day 21. The activity of offspring of the treated group was lower than that of controls during the first 12 hours but was similar during the second 12 hours. It is unknown if the decreased activity observed in the sodium acetate treated group to was a result of exposure in utero and/or post-weaning, since the pups were exposed during both time periods.). Acetic acid had no effects on implantation or on maternal or fetal survival in rats, mice or rabbits dosed via gavage during gestation days 6-19 at doses up to 1600 mg/kg/day. The number of abnormalities seen in either soft or skeletal tissues of the test groups did not differ from the number occurring in the controls. Sodium acetate had no effect on pregnant mice or offspring when mice were administered 1000 mg/kg bw, by gavage on days 8-12 of gestation. |
| **CHLORHEXIDINE GLUCONATE & TALL OIL FATTY ACIDS DIETHANOLAMIDE** | The following information refers to contact allergens as a group and may not be specific to this product.<br>Contact allergies quickly manifest themselves as contact eczema, more rarely as urticaria or Quincke's oedema. The pathogenesis of contact eczema involves a cell-mediated (T lymphocytes) immune reaction of the delayed type. Other allergic skin reactions, e.g. contact urticaria, involve antibody-mediated immune reactions. The significance of the contact allergen is not simply determined by its sensitisation potential: the distribution of the substance and the opportunities for contact with it are equally important. A weakly sensitising substance which is widely distributed can be a more important allergen than one with stronger sensitising potential with which few individuals come into contact. From a clinical point of view, substances are noteworthy if they produce an allergic test reaction in more than 1% of the persons tested. |
| **TALL OIL FATTY ACIDS DIETHANOLAMIDE & ACETIC ACID GLACIAL & CELLULOSE** | 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.<br>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. |
| **TALL OIL FATTY ACIDS DIETHANOLAMIDE & ACETIC ACID GLACIAL** | The material may produce severe irritation to the eye causing pronounced inflammation. Repeated or prolonged exposure to irritants may produce conjunctivitis. |
| **TALL OIL FATTY ACIDS DIETHANOLAMIDE & WATER** | No significant acute toxicological data identified in literature search. |

| | | | |
|---|---|---|---|
| **Acute Toxicity** | ✗ | **Carcinogenicity** | ✗ |
| **Skin Irritation/Corrosion** | ✓ | **Reproductivity** | ✗ |
| **Serious Eye Damage/Irritation** | ✓ | **STOT - Single Exposure** | ✗ |
| **Respiratory or Skin sensitisation** | ✓ | **STOT - Repeated Exposure** | ✓ |
| **Mutagenicity** | ✗ | **Aspiration Hazard** | ✗ |

***Legend:*** ✗ *– Data either not available or does not fill the criteria for classification*
✓ *– Data available to make classification*

## SECTION 12 Ecological information

### Toxicity

**MICROSHIELD 2 SKIN CLEANSER**

| Endpoint | Test Duration (hr) | Species | Value | Source |
|---|---|---|---|---|
| Not Available | Not Available | Not Available | Not Available | Not Available |

**chlorhexidine gluconate**

| Endpoint | Test Duration (hr) | Species | Value | Source |
|---|---|---|---|---|
| LC50 | 96 | Fish | 2.08mg/L | 2 |
| EC50 | 48 | Crustacea | 0.087mg/L | 2 |
| EC50 | 72 | Algae or other aquatic plants | 0.011mg/L | 2 |
| NOEC | 72 | Algae or other aquatic plants | 0.007mg/L | 2 |

**tall oil fatty acids diethanolamide**

| Endpoint | Test Duration (hr) | Species | Value | Source |
|---|---|---|---|---|
| Not Available | Not Available | Not Available | Not Available | Not Available |

**Continued...**

| | | | | | |
|---|---|---|---|---|---|
| **acetic acid glacial** | **Endpoint** | **Test Duration (hr)** | **Species** | **Value** | **Source** |
| | LC50 | 96 | Fish | >1-mg/L | 2 |
| | EC50 | 48 | Crustacea | >1-mg/L | 2 |
| | EC50 | 72 | Algae or other aquatic plants | >1-mg/L | 2 |
| | NOEC | 72 | Algae or other aquatic plants | 1-mg/L | 2 |
| **cellulose** | **Endpoint** | **Test Duration (hr)** | **Species** | **Value** | **Source** |
| | Not Available | Not Available | Not Available | Not Available | Not Available |
| **water** | **Endpoint** | **Test Duration (hr)** | **Species** | **Value** | **Source** |
| | Not Available | Not Available | Not Available | Not Available | Not Available |
| ***Legend:*** | *Extracted from 1. IUCLID Toxicity Data 2. Europe ECHA Registered Substances - Ecotoxicological Information - Aquatic Toxicity 3. EPIWIN Suite V3.12 (QSAR) - Aquatic Toxicity Data (Estimated) 4. US EPA, Ecotox database - Aquatic Toxicity Data 5. ECETOC Aquatic Hazard Assessment Data 6. NITE (Japan) - Bioconcentration Data 7. METI (Japan) - Bioconcentration Data 8. Vendor Data* | | | | |

68sR52/53

### Persistence and degradability

| Ingredient | Persistence: Water/Soil | Persistence: Air |
|---|---|---|
| acetic acid glacial | LOW | LOW |
| cellulose | LOW | LOW |
| water | LOW | LOW |

### Bioaccumulative potential

| Ingredient | Bioaccumulation |
|---|---|
| acetic acid glacial | LOW (LogKOW = -0.17) |
| cellulose | LOW (LogKOW = -5.1249) |
| water | LOW (LogKOW = -1.38) |

### Mobility in soil

| Ingredient | Mobility |
|---|---|
| acetic acid glacial | HIGH (KOC = 1) |
| cellulose | LOW (KOC = 10) |
| water | LOW (KOC = 14.3) |

## SECTION 13 Disposal considerations

### Waste treatment methods

| | |
|---|---|
| **Product / Packaging disposal** | ▸ Recycle wherever possible.<br>▸ 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.<br>▸ Dispose of by: burial in a land-fill specifically licensed to accept chemical and / or pharmaceutical wastes or incineration in a licensed apparatus (after admixture with suitable combustible material).<br>▸ Decontaminate empty containers. Observe all label safeguards until containers are cleaned and destroyed.<br>▸ Containers may still present a chemical hazard/ danger when empty.<br>▸ Return to supplier for reuse/ recycling if possible.<br>Otherwise:<br>▸ 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.<br>▸ Where possible retain label warnings and SDS and observe all notices pertaining to the product. |

Ensure that the hazardous substance is disposed in accordance with the Hazardous Substances (Disposal) Notice 2017

### Disposal Requirements

Packages that have been in direct contact with the hazardous substance must be only disposed if the hazardous substance was appropriately removed and cleaned out from the package. The package must be disposed according to the manufacturer's directions taking into account the material it is made of. Packages which hazardous content have been appropriately treated and removed may be recycled.
The hazardous substance must only be disposed if it has been treated by a method that changed the characteristics or composition of the substance and it is no longer hazardous.
Only dispose to the environment if a tolerable exposure limit has been set for the substance.
Only deposit the hazardous substance into or onto a landfill or sewage facility or incinerator, where the hazardous substance can be handled and treated appropriately.

## SECTION 14 Transport information

### Labels Required

| | |
|---|---|
| **Marine Pollutant** | NO |
| **HAZCHEM** | Not Applicable |

**Continued...**

**Land transport (UN): 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**

This substance is to be managed using the conditions specified in an applicable Group Standard

| HSR Number | Group Standard |
|---|---|
| HSR002624 | N.O.S. (Subsidiary Hazard) Group Standard 2017 |
| HSR002535 | Gas Under Pressure Mixtures (Subsidiary Hazard) Group Standard 2017 |
| HSR002596 | Laboratory Chemicals and Reagent Kits Group Standard 2017 |
| HSR002530 | Cleaning Products (Subsidiary Hazard) Group Standard 2017 |
| HSR002585 | Fuel Additives (Subsidiary Hazard) Group Standard 2017 |
| HSR002519 | Aerosols (Subsidiary Hazard) Group Standard 2017 |
| HSR002521 | Animal Nutritional and Animal Care Products Group Standard 2017 |
| HSR002606 | Lubricants, Lubricant Additives, Coolants and Anti-freeze Agents (Subsidiary Hazard) Group Standard 2017 |
| HSR002644 | Polymers (Subsidiary Hazard) Group Standard 2017 |
| HSR002647 | Reagent Kits Group Standard 2017 |
| HSR002670 | Surface Coatings and Colourants (Subsidiary Hazard) Group Standard 2017 |
| HSR002638 | Photographic Chemicals (Subsidiary Hazard) Group Standard 2017 |
| HSR002565 | Embalming Products (Subsidiary Hazard) Group Standard 2017 |
| HSR002578 | Food Additives and Fragrance Materials (Subsidiary Hazard) Group Standard 2017 |
| HSR002558 | Dental Products (Subsidiary Hazard) Group Standard 2017 |
| HSR002684 | Water Treatment Chemicals (Subsidiary Hazard) Group Standard 2017 |
| HSR002573 | Fire Fighting Chemicals Group Standard 2017 |
| HSR100425 | Pharmaceutical Active Ingredients Group Standard 2017 |
| HSR002600 | Leather and Textile Products (Subsidiary Hazard) Group Standard 2017 |
| HSR002571 | Fertilisers (Subsidiary Hazard) Group Standard 2017 |
| HSR002648 | Refining Catalysts Group Standard 2017 |
| HSR002653 | Solvents (Subsidiary Hazard) Group Standard 2017 |
| HSR002544 | Construction Products (Subsidiary Hazard) Group Standard 2017 |
| HSR002549 | Corrosion Inhibitors (Subsidiary Hazard) Group Standard 2017 |
| HSR100757 | Veterinary Medicine (Limited Pack Size, Finished Dose) Standard 2017 |
| HSR100758 | Veterinary Medicines (Non-dispersive Closed System Application) Group Standard 2017 |
| HSR100759 | Veterinary Medicines (Non-dispersive Open System Application) Group Standard 2017 |
| HSR002612 | Metal Industry Products (Subsidiary Hazard) Group Standard 2017 |
| HSR002503 | Additives, Process Chemicals and Raw Materials (Subsidiary Hazard) Group Standard 2017 |
| HSR002552 | Cosmetic Products Group Standard 2017 |

**chlorhexidine gluconate is found on the following regulatory lists**

New Zealand Approved Hazardous Substances with controls
New Zealand Hazardous Substances and New Organisms (HSNO) Act - Classification of Chemicals
New Zealand Hazardous Substances and New Organisms (HSNO) Act - Classification of Chemicals - Classification Data
New Zealand Inventory of Chemicals (NZIoC)

**tall oil fatty acids diethanolamide is found on the following regulatory lists**

New Zealand Inventory of Chemicals (NZIoC)

**acetic acid glacial is found on the following regulatory lists**

New Zealand Approved Hazardous Substances with controls
New Zealand Hazardous Substances and New Organisms (HSNO) Act - Classification of Chemicals
New Zealand Hazardous Substances and New Organisms (HSNO) Act - Classification of Chemicals - Classification Data
New Zealand Inventory of Chemicals (NZIoC)
New Zealand Workplace Exposure Standards (WES)

**cellulose is found on the following regulatory lists**

International WHO List of Proposed Occupational Exposure Limit (OEL) Values for Manufactured Nanomaterials (MNMS)
New Zealand Inventory of Chemicals (NZIoC)
New Zealand Workplace Exposure Standards (WES)

**water is found on the following regulatory lists**

New Zealand Inventory of Chemicals (NZIoC)

**Continued...**

### Hazardous Substance Location

Subject to the Health and Safety at Work (Hazardous Substances) Regulations 2017.

| Hazard Class | Quantity (Closed Containers) | Quantity (Open Containers) |
|---|---|---|
| Not Applicable | Not Applicable | Not Applicable |

### Certified Handler

Subject to Part 4 of the Health and Safety at Work (Hazardous Substances) Regulations 2017.

| Class of substance | Quantities |
|---|---|
| Not Applicable | Not Applicable |

Refer Group Standards for further information

### Tracking Requirements

Not Applicable

### National Inventory Status

| National Inventory | Status |
|---|---|
| Australia - AIIC | Yes |
| Australia Non-Industrial Use | No (chlorhexidine gluconate; tall oil fatty acids diethanolamide; acetic acid glacial; cellulose; water) |
| Canada - DSL | Yes |
| Canada - NDSL | No (chlorhexidine gluconate; tall oil fatty acids diethanolamide; acetic acid glacial; water) |
| China - IECSC | Yes |
| Europe - EINEC / ELINCS / NLP | Yes |
| Japan - ENCS | No (chlorhexidine gluconate; tall oil fatty acids diethanolamide; cellulose) |
| Korea - KECI | Yes |
| New Zealand - NZIoC | Yes |
| Philippines - PICCS | No (chlorhexidine gluconate) |
| USA - TSCA | Yes |
| Taiwan - TCSI | Yes |
| Mexico - INSQ | No (tall oil fatty acids diethanolamide) |
| Vietnam - NCI | Yes |
| Russia - ARIPS | Yes |
| ***Legend:*** | *Yes = All CAS declared ingredients are on the inventory*<br>*No = One or more of the CAS listed ingredients are not on the inventory and are not exempt from listing(see specific ingredients in brackets)* |

## SECTION 16 Other information

| | |
|---|---|
| **Revision Date** | 01/11/2019 |
| **Initial Date** | 05/10/2015 |

### SDS Version Summary

| Version | Issue Date | Sections Updated |
|---|---|---|
| 3.1.1.1 | 01/11/2019 | One-off system update. NOTE: This may or may not change the GHS classification |

### Other information

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

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

### Definitions and abbreviations

PC—TWA: Permissible Concentration-Time Weighted Average
PC—STEL: Permissible Concentration-Short Term Exposure Limit
IARC: International Agency for Research on Cancer
ACGIH: American Conference of Governmental Industrial Hygienists
STEL: Short Term Exposure Limit
TEEL: Temporary Emergency Exposure Limit。
IDLH: Immediately Dangerous to Life or Health Concentrations
OSF: Odour Safety Factor
NOAEL :No Observed Adverse Effect Level
LOAEL: Lowest Observed Adverse Effect Level
TLV: Threshold Limit Value
LOD: Limit Of Detection
OTV: Odour Threshold Value
BCF: BioConcentration Factors
BEI: Biological Exposure Index



**Continued...**

**end of SDS**