Liquid hand wash antibacterial orange

Pelikan Artline

Version No: 1.1
Safety Data Sheet according to WHS and ADG requirements

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

Product Identifier

<table>
<thead>
<tr>
<th>Product name</th>
<th>Liquid hand wash antibacterial orange</th>
</tr>
</thead>
<tbody>
<tr>
<td>Synonyms</td>
<td>Not Available</td>
</tr>
</tbody>
</table>
| Other means of identification | 500ml - 6350707031  
5L - 635070713  
0.4ml Cartridge - 635079613 |

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

Relevant identified uses

Hand washing

Details of the supplier of the safety data sheet

Registered company name

Pelikan Artline

Address

17-19 Waterloo Street, Queanbeyan NSW 2620 Australia

Telephone

+61-2-61328200

Fax

+61-2-62844556

Website

Not Available

Email

MSDS@pelikanartline.com.au

Emergency telephone number

Association / Organisation

Poisons Information Line

Emergency telephone numbers

13 1 1 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

Not Applicable

Classification [1]

Eye Irritation Category 2A, Acute Aquatic Hazard Category 3, Chronic Aquatic Hazard Category 3

Legend:


Label elements

GHS label elements

SIGNAL WORD WARNING

Hazard statement(s)

H319 Causes serious eye irritation.

H402 Harmful to aquatic life

H412 Harmful to aquatic life with long lasting effects.

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.

P273 Avoid release to the environment.
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.
- **P337+P313** If eye irritation persists. Get medical advice/attention.

Precautionary statement(s) Storage

- Not Applicable

Precautionary statement(s) Disposal

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

**SECTION 3 COMPOSITION / INFORMATION ON INGREDIENTS**

**Substances**

See section below for composition of Mixtures

**Mixtures**

<table>
<thead>
<tr>
<th>CAS No</th>
<th>% [weight]</th>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>7732-18-5</td>
<td>&gt;60</td>
<td>water</td>
</tr>
<tr>
<td>9004-82-4</td>
<td>&lt;10</td>
<td>sodium lauryl ether sulfate</td>
</tr>
<tr>
<td>61789-40-0</td>
<td>&lt;10</td>
<td>cocamidopropylbetaine</td>
</tr>
<tr>
<td>56-81-5</td>
<td>&lt;10</td>
<td>glycerol</td>
</tr>
<tr>
<td>26590-05-6</td>
<td>&lt;10</td>
<td>dimethylallylammmonium chloride/ acrylamide polymer</td>
</tr>
<tr>
<td>69-72-7</td>
<td>&lt;10</td>
<td>salicylic acid</td>
</tr>
<tr>
<td>92879-30-6</td>
<td>&lt;10</td>
<td>(C8-10)alkyl D-glycopyranoside</td>
</tr>
<tr>
<td>26542-23-4</td>
<td>&lt;10</td>
<td>4,5-dichloro-2-methyl-4-isothiazolin-3-one</td>
</tr>
<tr>
<td>26172-55-4</td>
<td>&lt;10</td>
<td>5-chloro-2-methyl-4-isothiazolin-3-one</td>
</tr>
</tbody>
</table>

**SECTION 4 FIRST AID MEASURES**

**Description of first aid measures**

- **Eye Contact**: If this product comes in contact with the eyes:
  - Wash out immediately with fresh running water.
  - Ensure complete irrigation of the eye by keeping eyelids apart and away from eye and moving the eyelids by occasionally lifting the upper and lower lids.
  - Seek medical attention without delay; if pain persists or recur seek medical attention.
  - Removal of contact lenses after an eye injury should only be undertaken by skilled personnel.

- **Skin Contact**: If skin contact occurs:
  - Immediately remove all contaminated clothing, including footwear.
  - Flush skin and hair with running water (and soap if available).
  - Seek medical attention in event of irritation.

- **Inhalation**: If fumes, aerosols or combustion products are inhaled remove from contaminated area.
  - Other measures are usually unnecessary.

- **Ingestion**: Immediately give a glass of water.
  - First aid is not generally required. If in doubt, contact a Poisons Information Centre or a doctor.

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

Treat symptomatically.

- *For salicylate intoxication:*
  - Pending gastric lavage, use emetics such as syrup of ipecac or delay gastric emptying and absorption by swallowing a slurry of activated charcoal. *Do not give ipecac after charcoal.*
  - *Gastric lavage with water or perhaps sodium bicarbonate solution (3%-5%).* Mild alkalies delay salicylate absorption from the stomach and perhaps slightly from the duodenum.
  - *Saline catharsis with sodium or magnesium sulfate (15-30 gm in water).*
  - *Take an immediate blood sample for an appraisal of the patient’s acid-base status. A pH determination on an anaerobic sample of arterial blood is best.* An analysis of the plasma salicylate concentration should be made at the same time. Laboratory controls are almost essential for the proper management of severe salicylism.
  - *In the presence of an established acidosis, alkali therapy is essential,* but at least in an adult, alkali should be withheld until its need is demonstrated by chemical analysis. The intensity of treatment depends on the intensity of acidosis. In the presence of vomiting, intravenous sodium bicarbonate is the most satisfactory of all alkali therapy.
  - *Correct dehydration and hypoglycemia (if present)* by the intravenous administration of glucose in water or in isotonic saline. The administration of glucose may also serve to remedy ketosis which is often seen in poisoned children.
  - *Even in patients without hypoglycemia, infusions of glucose adequate to produce distinct hyperglycaemia are recommended to prevent glucose depletion in the brain. This recommendation is based on impressive experimental data in animals.*
  - *Renal function should be supported by correcting dehydration and incipient shock. Overhydration is not justified.* An alkaline urine should be maintained by the administration of alkali if necessary with care to prevent a severe systemic alkalosis. As long as urine remains alkaline (pH above 7.5), administration of an osmotic diuretic such as mannitol or perhaps THAM is useful, but one must be careful to avoid hypokalaemia. Supplements of potassium chloride should be included in parenteral fluids.
  - *Small doses of barbiturates, diazepam, paraldehyde, or perhaps other sedatives (but probably not morphine)* may be required to suppress extreme restlessness and convulsions.
  - *For hyperpyrexia, use sponge baths.* The presence of petechiae or other signs of haemorrhagic tendency calls for a large Vitamin K dose and perhaps ascorbic acid.Minor transfusions may be necessary since bleeding in salicylism is not always due to a prothrombin effect.
  - *Haemodialysis and haemoperfusion have proved useful in salicylate poisoning,* as have peritoneal dialysis and exchange transfusions, but alkaline diuretic therapy is probably sufficient except in fulminating cases.

[GOSSELIN, et al.: Clinical Toxicology of Commercial Products]
The mechanism of the toxic effect involves metabolic acidosis, respiratory alkalosis, hypoglycaemia, and potassium depletion. Salicylate poisoning is characterised by extreme acid-base disturbances, electrolyte disturbances and decreased levels of consciousness. There are differences between acute and chronic toxicity and a varying clinical picture which is dependent on the age of the patient and their kidney function. The major feature of poisoning is metabolic acidosis due to "uncoupling of oxidative phosphorylation" which produces an increased metabolic rate, increased oxygen consumption, increased formation of carbon dioxide, increased heat production and increased utilisation of glucose. Direct stimulation of the respiratory centre leads to hyperventilation and respiratory alkalosis. This leads to compensatory increased renal excretion of bicarbonate which contributes to the metabolic acidosis which may coexist or develop subsequently. Hyperglycaemia may occur as a result of increased glucose demand, increased rates of tissue glycolysis, and impaired rate of glucose synthesis. **NOTE:** Tissue glucose levels may be lower than plasma levels. Hyperglycaemia may occur due to increased glycosgenolysis. Potassium depletion occurs as a result of increased renal excretion as well as intracellular movement of potassium.

Salicylates competitively inhibit vitamin K dependent synthesis of factors II, VII, IX, X and in addition, may produce a mild dose dependent hepatitis. Salicylates are bound to albumin. The extent of protein binding is concentration dependent (and falls with higher blood levels). This, and the effects of acidosis, decreasing ionisation, means that the volume of distribution increases markedly in overdose as does CNS penetration. The extent of protein binding (50-80%) and the rate of metabolism are concentration dependent. Hepatic clearance has zero order kinetics and thus the therapeutic half-life of 2-4.5 hours but the half-life in overdose is 18-36 hours. Renal excretion is the most important route in overdose. Thus when the salicylate concentrations are in the toxic range there is increased tissue distribution and impaired clearance of the drug.

HyperT ox 3.0 https://www.ozemail.com.au/-ouad/SALI0001.HTA

**Liquid hand wash antibacterial orange**

**Issue Date:** 15/03/2016

**Print Date:** 15/03/2016

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**SECTION 5 FIREFIGHTING MEASURES**

**Extinguishing media**

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

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

| Fire Incompatibility | None known. |

**Advice for firefighters**

**Fire Fighting**

- Alert Fire Brigade and tell them location and nature of hazard.
- Wear breathing apparatus plus protective gloves in the event of a fire.
- Prevent, by any means available, spillage from entering drains or water courses.
- Use fire fighting procedures suitable for surrounding area.
- **DO NOT** approach containers suspected to be hot.
- Cool fire exposed containers with water spray from a protected location.
- If safe to do so, remove containers from path of fire.
- Equipment should be thoroughly decontaminated after use.

**Fire/Explosion Hazard**

- Non combustible.
- Not considered a significant fire risk, however containers may burn.
  May emit poisonous fumes. May emit corrosive fumes.

**SECTION 6 ACCIDENTAL RELEASE MEASURES**

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

| Minor Spills | Moderate hazard. |
| Control personal contact with the substance, by using protective equipment. | Wear breathing apparatus plus protective gloves. |
| Collect recoverable product into labelled containers for recycling. | Prevent, by any means available, spillage from entering drains or water course. |
| Collect spill with sand, earth or vermiculite. | Stop leak if safe to do so. |
| Collect spill with sand, earth or vermiculite. | Collect recoverable product into labelled containers for recycling. |

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

**SECTION 7 HANDLING AND STORAGE**

**Precautions for safe handling**

**Safe handling**

- Avoid all personal contact, including inhalation.
- Wear protective clothing when risk of exposure occurs.
- Use in a well-ventilated area.
- Prevent concentration in hollows and sumps.
- **DO NOT** enter confined spaces until atmosphere has been checked.
- **DO NOT** allow material to contact humans, exposed food or food utensils.
Avoid contact with incompatible materials.
When handling, DO NOT eat, drink or smoke.
DO NOT allow clothing wet with material to stay in contact with skin.

Conditions for safe storage, including any incompatibilities

Suitable container
- Polyethylene or polypropylene container.
- Packing as recommended by manufacturer.
- 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

<table>
<thead>
<tr>
<th>Source</th>
<th>Ingredient</th>
<th>Material name</th>
<th>TWA</th>
<th>STEL</th>
<th>Peak</th>
<th>Notes</th>
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<tr>
<td>Australia Exposure Standards</td>
<td>glycerol</td>
<td>Glycerin mist</td>
<td>10 mg/m³</td>
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<td>Not Available</td>
<td>Not Available</td>
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EMERGENCY LIMITS

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<th>TEEL-2</th>
<th>TEEL-3</th>
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<tbody>
<tr>
<td>glycerol</td>
<td>Glycerine (mist); (Glycerol; Glycerin)</td>
<td>30 mg/m³</td>
<td>310 mg/m³</td>
<td>2500 mg/m³</td>
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<td>dimethyldialkylammonium chloride/ acrylamide polymer</td>
<td>Poly(acrylamide-co-diallyldimethylammonium chloride)</td>
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<td>salicylic acid</td>
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<td>1.2 mg/m³</td>
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<td>5-chloro-2-methyl-4-isothiazolin-3-one</td>
<td>Chloro-2-methyl-4-isothiazolin-3-one, 5-</td>
<td>0.2 mg/m³</td>
<td>0.2 mg/m³</td>
<td>0.2 mg/m³</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>Original IDLH</th>
<th>Revised IDLH</th>
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</thead>
<tbody>
<tr>
<td>water</td>
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<td>Not Available</td>
</tr>
<tr>
<td>sodium lauryl ether sulfate</td>
<td>Not Available</td>
<td>Not Available</td>
</tr>
<tr>
<td>cocamidopropylbetaine</td>
<td>Not Available</td>
<td>Not Available</td>
</tr>
<tr>
<td>glycerol</td>
<td>Not Available</td>
<td>Not Available</td>
</tr>
<tr>
<td>dimethyldialkylammonium chloride/ acrylamide polymer</td>
<td>Not Available</td>
<td>Not Available</td>
</tr>
<tr>
<td>salicylic acid</td>
<td>Not Available</td>
<td>Not Available</td>
</tr>
<tr>
<td>(C8-10)salicyl D-glycopyranoside</td>
<td>Not Available</td>
<td>Not Available</td>
</tr>
<tr>
<td>4,5-dichloro-2-methyl-4-isothiazolin-3-one</td>
<td>Not Available</td>
<td>Not Available</td>
</tr>
<tr>
<td>5-chloro-2-methyl-4-isothiazolin-3-one</td>
<td>Not Available</td>
<td>Not Available</td>
</tr>
</tbody>
</table>

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.

Personal protection
- Safety glasses with side shields.
- Chemical goggles.
- 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 ad sorption 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.

Eye and face protection
- Wear chemical protective gloves, e.g. PVC.
- Wear safety footwear or safety gumboots, e.g. Rubber

NOTE:
The material may produce skin sensitisation in predisposed individuals. Care must be taken, when removing gloves and other protective equipment, to avoid...

Skin protection
See Hand protection below

Hands/feet protection
- Wear chemical protective gloves, e.g. PVC.
- Wear safety footwear or safety gumboots, e.g. Rubber

Continued...
SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

<table>
<thead>
<tr>
<th>Appearance</th>
<th>A red liquid liquid</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical state</td>
<td>Liquid</td>
</tr>
<tr>
<td>Odour</td>
<td>Orange</td>
</tr>
<tr>
<td>Odour threshold</td>
<td>Not Available</td>
</tr>
<tr>
<td>pH (as supplied)</td>
<td>6-8</td>
</tr>
<tr>
<td>Melting point / freezing point (°C)</td>
<td>Not Available</td>
</tr>
<tr>
<td>Initial boiling point and boiling range (°C)</td>
<td>Not Available</td>
</tr>
<tr>
<td>Flash point (°C)</td>
<td>Not Available</td>
</tr>
<tr>
<td>Evaporation rate</td>
<td>Not Available</td>
</tr>
<tr>
<td>Flammability</td>
<td>Not Available</td>
</tr>
<tr>
<td>Upper Explosive Limit (%)</td>
<td>Not Available</td>
</tr>
</tbody>
</table>

Relative density (Water = 1) | 1.00-1.05
Partition coefficient n-octanol / water | Not Available
Auto-ignition temperature (°C) | Not Available
Decomposition temperature | Not Available
Viscosity (cSt) | Not Available
Molecular weight (g/mol) | Not Available
Taste | Not Available
Explosive properties | Not Available
Oxidising properties | Not Available
Surface Tension (dyn/cm or mN/m) | Not Available

* CPI - Chemwatch Performance Index
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)
SECTION 10 STABILITY AND REACTIVITY

Reactivity
See section 7

Chemical stability
- Unstable in the presence of incompatible materials.
- Product is considered stable.
- Hazardous polymerisation will not occur.

Possibility of hazardous reactions
See section 7

Conditions to avoid
See section 7

Incompatible materials
See section 7

Hazardous decomposition products
See section 5

SECTION 11 TOXICOLOGICAL INFORMATION

Information on toxicological effects

Inhaled
The material is not thought to produce either adverse health effects or irritation of the respiratory tract following inhalation (as classified by EC Directives using animal models). Nevertheless, adverse systemic effects have been produced following exposure of animals by at least one other route and good hygiene practice requires that exposure be kept to a minimum and that suitable control measures be used in an occupational setting.
Not normally a hazard due to non-volatile nature of product

Ingestion
The material has NOT been classified by EC Directives or other classification systems as "harmful by ingestion". This is because of the lack of corroborating animal or human evidence.
High oral doses of salicylates, such as aspirin, may cause a mild burning pain in the throat and stomach, causing vomiting. This is followed (within hours) by deep, rapid breathing, tiredness, nausea and further vomiting, thirst and diarrhoea.

Skin Contact
The material is not thought to be a skin irritant (as classified by EC Directives using animal models). Temporary discomfort, however, may result from prolonged dermal exposures.
Skin contact with the material may damage the health of the individual; systemic effects may result following absorption. Open cuts, abraded or irritated skin should not be exposed to this material.
Entry into the blood-stream, through, for example, cuts, abrasions or lesions, may produce systemic injury with harmful effects. Examine the skin prior to the use of the material and ensure that any external damage is suitably protected.

Eye
Although the liquid is not thought to be an irritant (as classified by EC Directives), direct contact with the eye may produce transient discomfort characterised by tearing or conjunctival redness (as with windburn).

Chronic
Substance accumulation, in the human body, may occur and may cause some concern following repeated or long-term occupational exposure.
There is some evidence that inhaling this product is more likely to cause a sensitisation reaction in some persons compared to the general population.
There is limited evidence that, skin contact with this product is more likely to cause a sensitisation reaction in some persons compared to the general population.
Chronic exposure to salicylates produces problems with metabolism, central nervous system disturbances, or kidney damage. Those with pre-existing damage to the eye, skin or kidney are especially at risk.

<table>
<thead>
<tr>
<th>Substance</th>
<th>TOXICITY</th>
<th>IRRITATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Liquid hand wash antibacterial orange</td>
<td>TOXICITY Not Available</td>
<td>IRRITATION Not Available</td>
</tr>
<tr>
<td>water</td>
<td>TOXICITY Oral (rat) LD50: &gt;90000 mg/kg[2]</td>
<td>IRRITATION Not Available</td>
</tr>
<tr>
<td>sodium lauryl ether sulfate</td>
<td>TOXICITY Oral (rat) LD50: 1600 mg/kg[2]</td>
<td>IRRITATION Skin (rabbit):25 mg/24 hr moderate</td>
</tr>
<tr>
<td>cocamidopropylbetaine</td>
<td>TOXICITY Oral (rat) LD50: 2700 mg/kg[2]</td>
<td>IRRITATION Eye: primary irritant *</td>
</tr>
<tr>
<td></td>
<td></td>
<td>IRRITATION Skin: primary irritant *</td>
</tr>
<tr>
<td>glycerol</td>
<td>TOXICITY dermal (guinea pig) LD50: 54000 mg/kg[1]</td>
<td>IRRITATION Not Available</td>
</tr>
<tr>
<td></td>
<td></td>
<td>IRRITATION Oral (rat) LD50: &gt;20-&lt;39800 mg/kg[1]</td>
</tr>
<tr>
<td>dimethyldialkylammonium chloride/ acrylamide polymer</td>
<td>TOXICITY Not Available</td>
<td>IRRITATION Not Available</td>
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Continued...
<table>
<thead>
<tr>
<th>Organic Substance</th>
<th>Toxicity</th>
<th>Irritation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Salicylic acid</td>
<td>dermal (rat) LD50: &gt;2000 mg/kg[^1]</td>
<td>Eye (rabbit): 100 mg - SEVERE</td>
</tr>
<tr>
<td></td>
<td>Oral (rat) LD50: 200-2000 mg/kg[^1]</td>
<td>Skin (rabbit): 500 mg/24h - mild</td>
</tr>
<tr>
<td>(C8-10)alkyl D-glycopyranoside</td>
<td>Dermal (rabbit) LD50: &gt;2000 mg/kg[^2]</td>
<td>[Chubb National Foam Inc.]</td>
</tr>
<tr>
<td>4,5-dichloro-2-methyl-4-isothiazolin-3-one</td>
<td>Not Available</td>
<td>Not Available</td>
</tr>
<tr>
<td>5-chloro-2-methyl-4-isothiazolin-3-one</td>
<td>Not Available</td>
<td>Not Available</td>
</tr>
</tbody>
</table>

**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

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**SODIUM LAURYL ETHER SULFATE**
No significant acute toxicological data identified in literature search.
Alcohol ethoxysulfates (AES) are of low acute toxicity. Neat AES are irritant to the skin and eyes. The material may produce moderate eye irritation leading to inflammation. Repeated or prolonged exposure to irritants may produce conjunctivitis.

[^CESO]: The following information refers to contact allergens as a group and may not be specific to this product.

Contact allergies quickly manifest themselves as contact eczema, more rarely as urticaria or Quincke's oedema. The pathogenesis of contact eczema involves a cell-mediated (T lymphocytes) immune reaction of the delayed type. Other allergic skin reactions, e.g. contact urticaria, involve antibody-mediated immune reactions. 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. Possible cross-reactions to several fatty acid amidopropyl dimethylamines were observed in patients that were reported to have allergic contact dermatitis to a baby lotion that contained 0.2% oleamidopropyl dimethylamine.

Steamamidpropyl dimethylamine at 2% in hair conditioners was not a contact sensitizer when tested neat or diluted to 30%. However, irritation reactions were observed.

A 10-year retrospective study found that out of 46 patients with confirmed allergic eyelid dermatitis, 10.9% had relevant reactions to oleamidopropyl dimethylamine and 4.3% had relevant reactions to cocamidopropyl dimethylamine.

Several cases of allergic contact dermatitis were reported in patients from the Netherlands that had used a particular type of body lotion that contained oleamidopropyl dimethylamine.

In 12 patients tested with their personal cosmetics, containing the fatty acid amidopropyl dimethylamine cocamidopropyl betaine (CAPB), 9 had positive reactions to at least one dilution and 5 had irritant reactions. All except 3 patients, who were not tested, had 2 or 3+ reaction to the 3,3-dimethylaminopropylammonium (DMAPA, the reactant used in producing fatty acid amidopropyl dimethylamines) at concentrations as low as 0.05%. The presence of DMAPA was investigated via thin-layer chromatography in the personal cosmetics of 4 of the patients that had positive reactions. Most undiluted cationic surfactants satisfy the criteria for classification as Harmful (Xn) with R22 and as Irritant (X) for skin and eyes with R38 and R41.

The material may produce moderate eye irritation leading to inflammation. Repeated or prolonged exposure to irritants may produce conjunctivitis. The material may cause skin irritation after prolonged or repeated exposure and may produce contact skin redness, swelling, the production of vesicles, scaling and thickening of the skin. Anaphylactic reactions are easily absorbed in the gut and partly excreted unchanged in the faeces. It has not been shown to accumulate in the body.

Concentrated betaines are expected to irritate the skin and eyes, but dilute solutions only irritate the eyes.

No evidence of delayed contact hypersensitivity was found in animal testing. Tests for mutation-causing potential have proved negative.

[^Van Waters and Rogers]: [^Canada Colors and Chemicals Ltd.]

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**COCAMIDOPROPYLbetaine**

Asthma-like symptoms may continue for months or even years after exposure to the material ceases. This may be due to a non-allergic 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.

At very high concentrations, evidence predicts that glycerol may cause tremor, irritation of the skin, eyes, digestive tract and airway. Otherwise it is of low toxicity. There is no significant evidence to suggest that it causes cancer, genetic, reproductive or developmental toxicity.

---

**DIMETHYLDIALKYLAMMONIUM CHLORIDE/ ACRYLAMIDE POLYMER**
Most undiluted cationic surfactants satisfy the criteria for classification as Harmful (Xn) with R22 and as Irritant (X) for skin and eyes with R38 and R41.
No significant acute toxicological data identified in literature search.

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**GLYCEROL**

Asthma-like symptoms may continue for months or even years after exposure to the material ceases. This may be due to a non-allergic 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.

At very high concentrations, evidence predicts that glycerol may cause tremor, irritation of the skin, eyes, digestive tract and airway. Otherwise it is of low toxicity. There is no significant evidence to suggest that it causes cancer, genetic, reproductive or developmental toxicity.

---

**DIMETHYLALKYLAMMONIUM CHLORIDE/ ACRYLAMIDE POLYMER**
Most undiluted cationic surfactants satisfy the criteria for classification as Harmful (Xn) with R22 and as Irritant (X) for skin and eyes with R38 and R41.
No significant acute toxicological data identified in literature search.
The following information refers to contact allergens as a group and may not be specific to this product. Contact allergies quickly manifest themselves as contact eczema, more rarely as urticaria or Quincke's oedema. The pathogenesis of contact eczema involves a cell-mediated (T lymphocytes) immune reaction of the delayed type. Other allergic skin reactions, e.g. contact urticaria, involve antibody-mediated immune reactions. 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 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.

No significant acute toxicological data identified in literature search.

Asthma-like symptoms may continue for months or even years after exposure to the material ceases. This may be due to a non-allergic 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-atopical 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.

Asthma-like symptoms may continue for months or even years after exposure to the material ceases. This may be due to a non-allergic 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-atopical 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.

The members of this group are rapidly absorbed through the gastrointestinal tract, metabolised primarily in the liver, and excreted primarily in the urine either unchanged or as conjugates of benzoic acid derivatives. At high dose levels, gut micro-organisms may act to produce minor amounts of breakdown products. However, no adverse effects have been reported even at repeated high doses. Similarly, no effects were observed on reproduction, foetal development and tumour potential. The material may produce severe irritation to the eye causing pronounced inflammation. Repeated or prolonged exposure to irritants may produce conjunctivitis. The material may cause skin irritation after prolonged or repeated exposure and may produce on contact skin redness, swelling, the production of vesicles, scaling and thickening of the skin.

No significant acute toxicological data identified in literature search.

**SECTION 12 ECOLOGICAL INFORMATION**

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>Endpoint</th>
<th>Test Duration (hr)</th>
<th>Species</th>
<th>Value</th>
<th>Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>water</td>
<td>EC50</td>
<td>384</td>
<td>Crustacea</td>
<td>199.179mg/L</td>
<td>3</td>
</tr>
</tbody>
</table>
Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment. Do NOT allow product to come in contact with surface waters or to intertidal areas below the mean high water mark. Do not contaminate water when cleaning equipment or disposing of equipment wash-waters. Wastes resulting from use of the product must be disposed of on site or at approved waste sites. DO NOT discharge into sewer or waterways.

**Persistence and degradability**

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>Persistence: Water/Soil</th>
<th>Persistence: Air</th>
</tr>
</thead>
<tbody>
<tr>
<td>water</td>
<td>LOW</td>
<td>LOW</td>
</tr>
<tr>
<td>glycerol</td>
<td>LOW</td>
<td>LOW</td>
</tr>
<tr>
<td>salicylic acid</td>
<td>LOW</td>
<td>LOW</td>
</tr>
<tr>
<td>5-chloro-2-methyl-4-isothiazolin-3-one</td>
<td>HIGH</td>
<td>HIGH</td>
</tr>
</tbody>
</table>

**Bioaccumulative potential**

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>Bioaccumulation</th>
</tr>
</thead>
<tbody>
<tr>
<td>water</td>
<td>LOW (LogKOW = -1.38)</td>
</tr>
<tr>
<td>glycerol</td>
<td>LOW (LogKOW = -1.76)</td>
</tr>
<tr>
<td>salicylic acid</td>
<td>MEDIUM (BCF = 1000)</td>
</tr>
<tr>
<td>5-chloro-2-methyl-4-isothiazolin-3-one</td>
<td>LOW (LogKOW = 0.0444)</td>
</tr>
</tbody>
</table>

**Mobility in soil**

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>Mobility</th>
</tr>
</thead>
<tbody>
<tr>
<td>water</td>
<td>LOW (KOC = 14.3)</td>
</tr>
<tr>
<td>glycerol</td>
<td>HIGH (KOC = 1)</td>
</tr>
<tr>
<td>salicylic acid</td>
<td>LOW (KOC = 23.96)</td>
</tr>
<tr>
<td>5-chloro-2-methyl-4-isothiazolin-3-one</td>
<td>LOW (KOC = 45.15)</td>
</tr>
</tbody>
</table>

**SECTION 13 DISPOSAL CONSIDERATIONS**

**Waste treatment methods**
Legislation addressing waste disposal requirements may differ by country, state and/or territory. Each user must refer to laws operating in their area. In some areas, certain wastes must be tracked. A Hierarchy of Controls seems to be common - the user should investigate:

- Reducing the product by filtration, distillation or some other means.
- Recycle where possible.
- Consult manufacturer for recycling options or consult local or regional waste management authority for disposal if no suitable treatment or disposal facility can be identified.
- Dispose of by burial in a landfill specifically licenced to accept chemical and/or pharmaceutical wastes or incineration in a licenced apparatus (after admixture with suitable combustible material).
- Decant contamination.

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.

SECTION 14 TRANSPORT INFORMATION

<table>
<thead>
<tr>
<th>Source</th>
<th>Product name</th>
<th>Pollution Category</th>
<th>Ship Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>IMO MARPOL (Annex II) - List of Noxious Liquid Substances Carried in Bulk</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

SECTION 15 REGULATORY INFORMATION

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

- WATER(7732-18-5) IS FOUND ON THE FOLLOWING REGULATORY LISTS
  - Australia Inventory of Chemical Substances (AICS)
- SODIUM LAURYL ETHER SULFATE(9004-82-4) IS FOUND ON THE FOLLOWING REGULATORY LISTS
  - Australia Hazardous Substances Information System - Consolidated Lists
  - Australia Inventory of Chemical Substances (AICS)
- COCAMIDOPROPILBETaine(61789-40-0) IS FOUND ON THE FOLLOWING REGULATORY LISTS
  - Australia Inventory of Chemical Substances (AICS)
- GLYCEROL(56-81-5) IS FOUND ON THE FOLLOWING REGULATORY LISTS
  - Australia Exposure Standards
  - Australia Inventory of Chemical Substances (AICS)
- DIMETHYLDIALKYLAMMONIUM CHLORIDE/ACRYLAMIDE POLYMER(26590-05-6) IS FOUND ON THE FOLLOWING REGULATORY LISTS
  - Australia Inventory of Chemical Substances (AICS)
- SALICYLIC ACID(69-72-7) IS FOUND ON THE FOLLOWING REGULATORY LISTS
  - Australia Inventory of Chemical Substances (AICS)
- (C8-10)ALKYL D-GLYCOPYRANOSIDE(92879-30-6) IS FOUND ON THE FOLLOWING REGULATORY LISTS
  - Australia Inventory of Chemical Substances (AICS)
- 4,5-DICHLORO-2-METHYL-4-ISOTHIAZOLIN-3-ONE(26542-23-4) IS FOUND ON THE FOLLOWING REGULATORY LISTS
  - Australia Inventory of Chemical Substances (AICS)
- 5-CHLORO-2-METHYL-4-ISOTHIAZOLIN-3-ONE(26172-55-4) IS FOUND ON THE FOLLOWING REGULATORY LISTS
  - Australia Inventory of Chemical Substances (AICS)

National Inventory

<table>
<thead>
<tr>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>Y</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Source</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>Australia - AICS</td>
<td>Y</td>
</tr>
<tr>
<td>Canada - DSL</td>
<td>N (4,5-dichloro-2-methyl-4-isothiazolin-3-one; (C8-10)alkyl D-glycopyranoside)</td>
</tr>
<tr>
<td>Canada - NDSL</td>
<td>N (4,5-dichloro-2-methyl-4-isothiazolin-3-one; 5-chloro-2-methyl-4-isothiazolin-3-one; glycerol; dimethyldialkylammonium chloride/ acrylamide polymer; water; (C8-10)alkyl D-glycopyranoside; salicylic acid; cocamidopropilbetaine)</td>
</tr>
<tr>
<td>China - IECSC</td>
<td>N (4,5-dichloro-2-methyl-4-isothiazolin-3-one)</td>
</tr>
</tbody>
</table>

Continued...
**Europe - EINEC / ELINCS / NLP**
N (4,5-dichloro-2-methyl-4-isothiazolin-3-one; dimethyldialkylammonium chloride/ acrylamide polymer)

**Japan - ENCS N** (4,5-dichloro-2-methyl-4-isothiazolin-3-one; water; (C8-10)alkyl D-glycopyranoside)

**Korea - KECI N** (4,5-dichloro-2-methyl-4-isothiazolin-3-one; (C8-10)alkyl D-glycopyranoside)

**New Zealand - NZIoC N** (4,5-dichloro-2-methyl-4-isothiazolin-3-one)

**Philippines - PICCS N** (4,5-dichloro-2-methyl-4-isothiazolin-3-one; (C8-10)alkyl D-glycopyranoside)

**USA - TSCA N** (4,5-dichloro-2-methyl-4-isothiazolin-3-one; (C8-10)alkyl D-glycopyranoside)


**Legend:**

Y = All ingredients are on the inventory
N = Not determined or one or more ingredients are not on the inventory and are not exempt from listing (see specific ingredients in brackets)

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**SECTION 16 OTHER INFORMATION**

**Other information**

**Ingredients with multiple cas numbers**

<table>
<thead>
<tr>
<th>Name</th>
<th>CAS No</th>
</tr>
</thead>
<tbody>
<tr>
<td>cocamidopropylbetaine</td>
<td>61789-40-0, 83139-08-3, 86438-79-1, 97862-59-4</td>
</tr>
<tr>
<td>glycerol</td>
<td>29796-42-7, 30049-52-6, 37228-54-9, 56-81-5, 75398-78-6, 78630-16-7, 8013-25-0</td>
</tr>
<tr>
<td>dimethyldialkylammonium chloride/ acrylicamide</td>
<td>108464-53-5, 26590-05-6</td>
</tr>
<tr>
<td>(C8-10)alkyl D-glycopyranoside</td>
<td>161207-97-1, 92879-30-6</td>
</tr>
</tbody>
</table>

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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