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

Product Identifier

Product name: Troy Chloromide Antiseptic Pump Spray

Synonyms: Not Available

Proper shipping name: ETHANOL (ETHYL ALCOHOL) or ETHANOL SOLUTION (ETHYL ALCOHOL SOLUTION)

Other means of identification: Not Available

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

Relevant identified uses: Aid in the treatment of topical infections, bacterial skin diseases, wounds, cuts and abrasions in cattle, pigs, sheep and dogs.

SECTION 2 HAZARDS IDENTIFICATION

Classification of the substance or mixture

Poisons Schedule: Not Applicable

Classification: [1] Flammable Liquid Category 2, Eye Irritation Category 2A, Acute Aquatic Hazard Category 3, Chronic Aquatic Hazard Category 3


Label elements

SIGNAL WORD | DANGER

Hazard statement(s)

H225 Highly flammable liquid and vapour.
H319 Causes serious eye irritation.
H412 Harmful to aquatic life with long lasting effects.

Precautionary statement(s) Prevention

P210 Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
P233 Keep container tightly closed.
P240 Ground/bond container and receiving equipment.
P241 Use explosion-proof electrical/ventilating/lighting/intrinsically safe equipment.
P242 Use only non-sparking tools.
P243 Take precautionary measures against static discharge.
Precautionary statement(s) Response

- **P370+P378** In case of fire: Use alcohol resistant foam or normal protein foam for extinction.
- **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.
- **P303+P361+P353** IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.

Precautionary statement(s) Storage

- **P403+P235** Store in a well-ventilated place. Keep cool.

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>64-17-5</td>
<td>&gt;89</td>
<td>ethanol</td>
</tr>
<tr>
<td>8044-71-1</td>
<td>0.8</td>
<td>cetrimide</td>
</tr>
<tr>
<td>88-04-0</td>
<td>0.24</td>
<td>4-chloro-3,5-xylenol</td>
</tr>
<tr>
<td>Not Available</td>
<td>&lt;10</td>
<td>ingredients nonhazardous</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:
  - Immediately hold eyelids apart and flush the eye continuously with running water.
  - Ensure complete irrigation of the eye by keeping eyelids apart and away from eye and moving the eyelids by occasionally lifting the upper and lower lids.
  - Continue flushing until advised to stop by the Poisons Information Centre or a doctor, or for at least 15 minutes.
  - 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 or combustion products are inhaled remove from contaminated area.
  - Lay patient down. Keep warm and rested.
  - Prostheses such as false teeth, which may block airway, should be removed, where possible, prior to initiating first aid procedures.
  - Apply artificial respiration if not breathing, preferably with a demand valve resuscitator, bag-valve mask device, or pocket mask as trained. Perform CPR if necessary.
  - Transport to hospital, or doctor.

**Ingestion**

- If swallowed do NOT induce vomiting.
  - If vomiting occurs, lean patient forward or place on left side (head-down position, if possible) to maintain open airway and prevent aspiration.
  - Observe the patient carefully.
  - Never give liquid to a person showing signs of being sleepy or with reduced awareness; i.e. becoming unconscious.
  - Give water to rinse out mouth, then provide liquid slowly and as much as casualty can comfortably drink.
  - Seek medical advice.

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

For acute or short term repeated exposures to ethanol:

- Acute ingestion in non-tolerant patients usually responds to supportive care with special attention to prevention of aspiration, replacement of fluid and correction of nutritional deficiencies (magnesium, thiamine pyridoxine, Vitamins C and K).
- Give 50% dextrose (50-100 ml) IV to obtunded patients following blood draw for glucose determination.
- Coma/nose patients should be treated with initial attention to airway, breathing, circulation and drugs of immediate importance (glucose, thiamine).
- Decontamination is probably unnecessary more than 1 hour after a single observed ingestion. Cathartics and charcoal may be given but are probably not effective in single ingestions.
- Fructose administration is contra-indicated due to side effects.

### SECTION 5 FIREFIGHTING MEASURES

**Extinguishing media**

- Alcohol stable foam.
- Dry chemical powder.
- Carbon dioxide.
- Water spray or fog - Large fires only.
Special hazards arising from the substrate or mixture

| Fire Incompatibility | Avoid contamination with strong oxidising agents as ignition may result |

Advice for firefighters

Fire Fighting

- Alert Fire Brigade and tell them location and nature of hazard.
- May be violently or explosively reactive.
- Wear breathing apparatus plus protective gloves in the event of a fire.
- Prevent, by any means available, spillage from entering drains or water course.
- Consider evacuation (or protect in place).
- Fight fire from a safe distance, with adequate cover.
- If safe, switch off electrical equipment until vapour fire hazard removed.
- Use water delivered as a fine spray to control the fire and cool adjacent area.
- Avoid spraying water onto liquid pools.
- 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.

Fire/Explosion Hazard

- Liquid and vapour are highly flammable.
- Severe fire hazard when exposed to heat, flame and/or oxidisers.
- Vapour forms an explosive mixture with air.
- Severe explosion hazard, in the form of vapour, when exposed to flame or spark.
- Vapour may travel a considerable distance to source of ignition.
- Heating may cause expansion/ decomposition with violent rupture of containers.
- On combustion, may emit toxic fumes of carbon monoxide (CO)

HAZCHEM: 2YE

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

- Remove all ignition sources.
- Clean up all spills immediately.
- Avoid breathing vapours and contact with skin and eyes.
- Control personal contact with the substance, by using protective equipment.
- Contain and absorb small quantities with vermiculite or other absorbent material.
- Wipe up.
- Collect residues in a flammable waste container.

Major Spills

- Clear area of personnel and move upwind.
- Alert Fire Brigade and tell them location and nature of hazard.
- May be violently or explosively reactive.
- Wear breathing apparatus plus protective gloves.
- Prevent, by any means available, spillage from entering drains or water course.
- Consider evacuation (or protect in place).
- No smoking, naked lights or ignition sources.
- Increase ventilation.
- Stop leak if safe to do so.
- Water spray or fog may be used to disperse/ absorb vapour.
- Contain spill with sand, earth or vermiculite.
- Use only spark-free shovels and explosion proof equipment.
- Collect recoverable product into labelled containers for recycling.
- Absorb remaining product with sand, earth or vermiculite.
- Collect solid residues and seal in labelled drums for disposal.
- Wash area and prevent runoff into drains.
- 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

Safe handling

- Avoid generating and breathing mist
- 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.
- Avoid smoking, naked lights, heat or ignition sources.
- When handling, DO NOT eat, drink or smoke.
- Vapour may ignite on pumping or pouring due to static electricity.
- DO NOT use plastic buckets.
- Earth and secure metal containers when dispensing or pouring product.
- Use spark-free tools when handling.
- Avoid contact with incompatible materials.
- Keep containers securely sealed.
- Avoid physical damage to containers.
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>
</tr>
</thead>
<tbody>
<tr>
<td>Australia Exposure Standards</td>
<td>ethanol</td>
<td>Ethyl alcohol</td>
<td>1000 ppm / 1880 mg/m3</td>
<td>Not Available</td>
<td>Not Available</td>
<td>Not Available</td>
</tr>
</tbody>
</table>

**EMERGENCY LIMITS**

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>Material name</th>
<th>TEEL-1</th>
<th>TEEL-2</th>
<th>TEEL-3</th>
</tr>
</thead>
<tbody>
<tr>
<td>ethanol</td>
<td>Ethyl alcohol; (Ethanol)</td>
<td>Not Available</td>
<td>Not Available</td>
<td>15000 ppm</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>Original IDLH</th>
<th>Revised IDLH</th>
</tr>
</thead>
<tbody>
<tr>
<td>ethanol</td>
<td>3,300 [LEL] ppm</td>
<td>Not Available</td>
</tr>
<tr>
<td>cetrimide</td>
<td>Not Available</td>
<td>Not Available</td>
</tr>
<tr>
<td>4-chloro-3,5-xylenol</td>
<td>Not Available</td>
<td>Not Available</td>
</tr>
<tr>
<td>ingredients nonhazardous</td>
<td>Not Available</td>
<td>Not Available</td>
</tr>
</tbody>
</table>

Exposure 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:

1. Process controls which involve changing the way a job activity or process is done to reduce the risk.
2. 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.
3. 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:**

- solvent, vapours, degreasing etc., evaporating from tank (in still air)
- aerosols, fumes from pouring operations, intermittent container filling, low speed conveyor transfers, welding, spray drift, plating acid fumes, pickling (released at low velocity into zone of active generation)
- direct spray, spray painting in shallow booths, drum filling, conveyer loading, crusher dusts, gas discharge (active generation into zone of rapid air motion)
- grinding, abrasive blasting, tumbling, high speed wheel generated dusts (released at high initial velocity into zone of very high rapid air motion).

**Air Speed:**

- 0.25-0.5 m/s (50-100 f/min.)
- 0.5-1 m/s (100-200 f/min.)
- 1-2.5 m/s (200-500 f/min.)
- 2.5-10 m/s (500-2000 f/min.)

Within each range the appropriate value depends on:

- **Lower end of the range**
  1. Room air currents minimal or favourable to capture
  2. Contaminants of low toxicity or of nuisance value only
  3. Intermittent, low production.
  4. Large hood or large air mass in motion

- **Upper end of the range**
  1. Disturbing room air currents
  2. Contaminants of high toxicity
  3. High production, heavy use
  4. Small hood - local control only

Simple theory shows that air velocity falls rapidly with distance away from the opening of a simple extraction pipe. Velocity generally decreases with the square of distance from the extraction point (in simple cases). Therefore the air speed at the extraction point should be adjusted, accordingly, after.
**Chemwatch: 6090-17**  
Version No: 2.1.1.1

**Troy Chloromide Antiseptic Pump Spray**

**Issue Date:** 27/06/2017  
**Print Date:** 17/07/2018

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### Personal protection

- Safety glasses with side shields; or as required.
- 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 adhesion with 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 lavage immediately and remove contact lens as soon as practicable.

### Eye and face protection

- Barrier cream with polyethylene gloves
- Wear chemical protective gloves, e.g. PVC.
- Wear safety footwear.

### Skin protection

- See Hand protection below

### Hands/feet protection

- Overall.
- Eyewash unit.

### Body protection

- See Other protection below

### Other protection

- Thorough . [CDC NIOSH Current Intelligence Bulletin 59], [AS/NZS 1336 or national equivalent]

---

**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:

Troy Chloromide Antiseptic Pump Spray

<table>
<thead>
<tr>
<th>Material</th>
<th>CPI</th>
</tr>
</thead>
<tbody>
<tr>
<td>BUTYL</td>
<td>C</td>
</tr>
<tr>
<td>NATURAL RUBBER</td>
<td>C</td>
</tr>
<tr>
<td>NATURAL+NEOPRENE</td>
<td>C</td>
</tr>
<tr>
<td>NEOPRENE</td>
<td>C</td>
</tr>
<tr>
<td>NITRILE</td>
<td>C</td>
</tr>
<tr>
<td>NITRILE+PVC</td>
<td>C</td>
</tr>
<tr>
<td>PE/EVAL/PE</td>
<td>C</td>
</tr>
<tr>
<td>PVC</td>
<td>C</td>
</tr>
</tbody>
</table>

* 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.

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**SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES**

### Information on basic physical and chemical properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Appearance</strong></td>
<td>Fluorescent pink slightly turbid flammable liquid with sweet, fragrant odour, mixes with water.</td>
</tr>
<tr>
<td><strong>Physical state</strong></td>
<td>Liquid</td>
</tr>
<tr>
<td><strong>Odour</strong></td>
<td>Not Available</td>
</tr>
<tr>
<td><strong>Odour threshold</strong></td>
<td>Not Available</td>
</tr>
<tr>
<td><strong>pH (as supplied)</strong></td>
<td>Not Available</td>
</tr>
<tr>
<td><strong>Melting point</strong></td>
<td>Not Available</td>
</tr>
<tr>
<td><strong>Initial boiling point and boiling range</strong></td>
<td>78</td>
</tr>
<tr>
<td><strong>Flash point</strong></td>
<td>16 approx.</td>
</tr>
<tr>
<td><strong>Evaporation rate</strong></td>
<td>Not Available</td>
</tr>
<tr>
<td><strong>Flammability</strong></td>
<td>HIGHLY FLAMMABLE</td>
</tr>
<tr>
<td><strong>Relative density (Water = 1)</strong></td>
<td>0.8 approx.</td>
</tr>
<tr>
<td><strong>Partition coefficient n-octanol / water</strong></td>
<td>Not Available</td>
</tr>
<tr>
<td><strong>Auto-ignition temperature (°C)</strong></td>
<td>Not Available</td>
</tr>
<tr>
<td><strong>Decomposition temperature</strong></td>
<td>Not Available</td>
</tr>
<tr>
<td><strong>Viscosity (cSt)</strong></td>
<td>Not Available</td>
</tr>
<tr>
<td><strong>Molecular weight (g/mol)</strong></td>
<td>Not Applicable</td>
</tr>
<tr>
<td><strong>Taste</strong></td>
<td>Not Available</td>
</tr>
<tr>
<td><strong>Explosive properties</strong></td>
<td>Not Available</td>
</tr>
<tr>
<td><strong>Oxidising properties</strong></td>
<td>Not Available</td>
</tr>
</tbody>
</table>

---

**Respiratory protection**

Type A 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.

<table>
<thead>
<tr>
<th>Required Minimum Protection Factor</th>
<th>Half-Face Respirator</th>
<th>Full-Face Respirator</th>
<th>Powered Air Respirator</th>
</tr>
</thead>
<tbody>
<tr>
<td>up to 5 x ES</td>
<td>Air-line*</td>
<td>A-2</td>
<td>A-PAPR 2 *</td>
</tr>
<tr>
<td>up to 10 x ES</td>
<td>-</td>
<td>A-3</td>
<td>-</td>
</tr>
<tr>
<td>10+ x ES</td>
<td>-</td>
<td>Air-line**</td>
<td>-</td>
</tr>
</tbody>
</table>

* - Continuous Flow;  ** - Continuous-flow or positive pressure demand

* - 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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**Continued...**
## 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

- There is some evidence to suggest that the material can cause respiratory irritation in some persons. The body’s response to such irritation can cause further lung damage.
- Inhalation hazard is increased at higher temperatures.
- Inhalation of high concentrations of gas/vapour causes lung irritation with coughing and nausea, central nervous depression with headache and dizziness, slowing of reflexes, fatigue and inco-ordination.

#### Ingestion

- Accidental ingestion of the material may be damaging to the health of the individual.
- Ingestion of ethanol (ethyl alcohol, "alcohol") may produce nausea, vomiting, bleeding from the digestive tract, abdominal pain, and diarrhoea. Effects on the body:

<table>
<thead>
<tr>
<th>Blood concentration</th>
<th>Effects</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt;1.5 g/L</td>
<td>Mild: impaired vision, co-ordination and reaction time; emotional instability</td>
</tr>
<tr>
<td>1.5-3.0 g/L</td>
<td>Moderate: slurred speech, confusion, inco-ordination, emotional instability, disturbances in perception and senses, possible blackouts, and impaired objective performance in standardized tests. Possible double vision, flushing, fast heart rate, sweating and inco-ordination. Slow breathing may occur rarely and fast breathing may develop in cases of metabolic acidosis, low blood sugar and low blood potassium. Central nervous system depression may progress to coma.</td>
</tr>
<tr>
<td>3.5 g/L</td>
<td>Severe: cold clammy skin, low body temperature and low blood pressure. Bradycardia and heart block have been reported. Depression of breathing may occur, respiratory failure may follow serious poisoning, choking on vomit may result in lung inflammation and swelling. Convulsions due to severe low blood sugar may also occur. Acute liver inflammation may develop.</td>
</tr>
</tbody>
</table>

#### Skin Contact

- There is some evidence to suggest that the material may cause moderate inflammation of the skin either following direct contact or after a delay of some time. Repeated exposure can cause contact dermatitis which is characterised by redness, swelling and blistering.

#### Eye

- There is evidence that material may produce eye irritation in some persons and produce eye damage 24 hours or more after instillation. Severe inflammation may be expected with pain.
- Direct contact of the eye with ethanol (alcohol) may cause an immediate stinging and burning sensation, with reflex closure of the lid, and a temporary, tearing injury to the cornea together with redness of the conjunctiva. Discomfort may last 2 days but usually the injury heals without treatment.

#### 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.
- There is some evidence from animal testing that exposure to this material may result in toxic effects to the unborn baby.
- Prolonged exposure to ethanol may cause damage to the liver and cause scarring. It may also worsen damage caused by other agents.

### Troy Chloromide Antiseptic Pump Spray

**TOXICITY**
- Not Available

**IRRITATION**
- Not Available
**Troy Chloromide Antiseptic Pump Spray**

**ETHANOL**

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.

For allyltrimethylammonium chloride (ATMAC)

Most undiluted cationic surfactants satisfy the criteria for classification as Harmful (Xn) with R22 and as Irritant (Xi) for skin and eyes with R38 and R41. In addition, certain surfactants will satisfy the criteria for classification as Corrosive with R34 in addition to the acute toxicity.

According to Centre Europeen des Agents de Surface et de leurs Intermediaires Organiques (CESIO), C8-18 allyltrimethylammonium chloride (ATMAC) (i.e., lauryl, cocoyl, coco, soy, and tallow) are classified as Corrosive (C) with the risk phrases R22 (Harmful if swallowed) and R34 (Causes burns). C16 ATMAC is classified as Harmful (Xn) with the risk phrases R22 (Harmful if swallowed), R38 (Irritating to skin), and R41 (Risk of serious damage to eyes). C20-22 ATMAC are classified as Irritant (Xi) with R36/38 (Irritating to eyes and skin).

Acute toxicity: ATMAC (the bromide) is poorly absorbed through the skin or the digestive tract. Acute oral toxicity of allyltrimethylammonium salts is somewhat higher than the toxicity of anionic and nonionic surfactants. This may be due to the strongly irritating effect which cationic surfactants have on the mucous membrane of the gastrointestinal tract. Cationic surfactants are generally about 10 times more toxic when given through a vein, compared to being given by mouth.

Skin and eye irritation: Skin irritation depends on surfactant concentration. Concentrations above 1% generally cause pronounced irritation. Cationic surfactants are the most irritating surfactants to the eye.

Many proteins in the skin are considerably more resistant to the denaturing effects of cationic surfactants compared to those of anionic surfactants. In contrast to the irreversible denaturing effect of sodium dodecyl sulfate, the adverse effects of some cationic surfactants on proteins may be reversible.

Sub-chronic toxicity: Animal testing over the long term resulted in no effects, except for reduced body weight at very high doses.

Reproductive toxicity: Animal testing showed no effects to the embryo or causing birth defects. Mild effects on the embryo were seen only at levels which were toxic to the mother.

Mutation-causing potential: Animal testing showed no mutation-causing potential for C16 and C18 ATMAC.

For quaternary ammonium compounds (QACs): Quaternary ammonium compounds (QACs) are cationic surfactants. They are in general more toxic than anionic and non-ionic surfactants. Because they can dissolve phospholipids and cholesterol in lipid membranes, QACs affect cell permeability which may lead to cell death. Further, QACs denature proteins as cationic materials precipitate protein and are accompanied by generalized tissue irritation.

It has been suggested that the experimentally determined decrease in the acute toxicity of QAs with chain length above C16 is due to decreased water solubility. In general it appears that QACs with single long-chain alkyl groups are more toxic and irritating than those with two such substitutions.

Animal testing shows that straight chain aliphatic QACs may cause lung tissue to release histamine. QACs may also show curare-like properties, causing limb paralysis and even life-threatening paralysis of the muscles of breathing, if they are injected. This paralysis seems to be transient.

From human testing, it is concluded that all the compounds investigated to date show similar toxicological properties.

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

Asthma-like symptoms may continue for months or even years after exposure to the material. This may be due to a non-allergic condition known as reactive Airways Dysfunction Syndrome (RADS) which can occur after exposure to high levels of highly irritating compound. Main criteria for diagnosing RADS include the absence of previous airways disease in a non-asthmatic individual, with sudden onset of persistent asthma-like symptoms within minutes to hours of a documented exposure to the irritant. Other criteria for diagnosis of RADS include a reversible airflow pattern on lung function tests, moderate to severe bronchial hyperreactivity on methacholine challenge testing, and the lack of minimal lymphocytic inflammation, without eosinophilia. 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. On the other hand, industrial bronchitis is a disorder that occurs as a result of exposure due to high concentrations of irritating substances (often particles) and is completely reversible after exposure ceases. The disorder is characterized by difficulty breathing, cough and mucus production.

Oral (rat) Median Lethal Dose 1000 mg/kg [Manufacturer]

According to Centre Europeen des Agents de Surface et de leurs Intermediaires Organiques (CESIO), C8-18 alkyltrimethylammonium chloride (ATMAC) (i.e., lauryl, cocoyl, coco, soy, and tallow) are classified as Corrosive (C) with the risk phrases R22 (Harmful if swallowed) and R34 (Causes burns). C16 ATMAC is classified as Harmful (Xn) with the risk phrases R22 (Harmful if swallowed), R38 (Irritating to skin), and R41 (Risk of serious damage to eyes). C20-22 ATMAC are classified as Irritant (Xi) with R36/38 (Irritating to eyes and skin).

Acute toxicity: ATMAC (the bromide) is poorly absorbed through the skin or the digestive tract. Acute oral toxicity of allyltrimethylammonium salts is somewhat higher than the toxicity of anionic and nonionic surfactants. This may be due to the strongly irritating effect which cationic surfactants have on the mucous membrane of the gastrointestinal tract. Cationic surfactants are generally about 10 times more toxic when given through a vein, compared to being given by mouth.

Skin and eye irritation: Skin irritation depends on surfactant concentration. Concentrations above 1% generally cause pronounced irritation. Cationic surfactants are the most irritating surfactants to the eye.

Many proteins in the skin are considerably more resistant to the denaturing effects of cationic surfactants compared to those of anionic surfactants. In contrast to the irreversible denaturing effect of sodium dodecyl sulfate, the adverse effects of some cationic surfactants on proteins may be reversible.

Sub-chronic toxicity: Animal testing over the long term resulted in no effects, except for reduced body weight at very high doses.

Reproductive toxicity: Animal testing showed no effects to the embryo or causing birth defects. Mild effects on the embryo were seen only at levels which were toxic to the mother.

Mutation-causing potential: Animal testing showed no mutation-causing potential for C16 and C18 ATMAC.

For quaternary ammonium compounds (QACs): Quaternary ammonium compounds (QACs) are cationic surfactants. They are in general more toxic than anionic and non-ionic surfactants. Because they can dissolve phospholipids and cholesterol in lipid membranes, QACs affect cell permeability which may lead to cell death. Further, QACs denature proteins as cationic materials precipitate protein and are accompanied by generalized tissue irritation.

It has been suggested that the experimentally determined decrease in the acute toxicity of QAs with chain length above C16 is due to decreased water solubility. In general it appears that QACs with single long-chain alkyl groups are more toxic and irritating than those with two such substitutions.

Animal testing shows that straight chain aliphatic QACs may cause lung tissue to release histamine. QACs may also show curare-like properties, causing limb paralysis and even life-threatening paralysis of the muscles of breathing, if they are injected. This paralysis seems to be transient.

From human testing, it is concluded that all the compounds investigated to date show similar toxicological properties.

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

Asthma-like symptoms may continue for months or even years after exposure to the material. This may be due to a non-allergic condition known as reactive Airways Dysfunction Syndrome (RADS) which can occur after exposure to high levels of highly irritating compound. Main criteria for diagnosing RADS include the absence of previous airways disease in a non-asthmatic individual, with sudden onset of persistent asthma-like symptoms within minutes to hours of a documented exposure to the irritant. Other criteria for diagnosis of RADS include a reversible airflow pattern on lung function tests, moderate to severe bronchial hyperreactivity on methacholine challenge testing, and the lack of minimal lymphocytic inflammation, without eosinophilia. 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. On the other hand, industrial bronchitis is a disorder that occurs as a result of exposure due to high concentrations of irritating substances (often particles) and is completely reversible after exposure ceases. The disorder is characterized by difficulty breathing, cough and mucus production.

Oral (rat) Median Lethal Dose 1000 mg/kg [Manufacturer]
SECTION 12 ECOLOGICAL INFORMATION

Toxicity

<table>
<thead>
<tr>
<th>Troy Chloromide Antiseptic Pump Spray</th>
<th>ENDPOINT</th>
<th>TEST DURATION (HR)</th>
<th>SPECIES</th>
<th>VALUE</th>
<th>SOURCE</th>
</tr>
</thead>
<tbody>
<tr>
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<td>Not Available</td>
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</table>

<table>
<thead>
<tr>
<th>ethanol</th>
<th>ENDPOINT</th>
<th>TEST DURATION (HR)</th>
<th>SPECIES</th>
<th>VALUE</th>
<th>SOURCE</th>
</tr>
</thead>
<tbody>
<tr>
<td>LC50</td>
<td>96</td>
<td>Fish</td>
<td>42mg/L</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>EC50</td>
<td>48</td>
<td>Crustacea</td>
<td>2mg/L</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>EC50</td>
<td>96</td>
<td>Algae or other aquatic plants</td>
<td>17.921mg/L</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>NOEC</td>
<td>2016</td>
<td>Fish</td>
<td>0.000375mg/L</td>
<td>4</td>
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</table>

<table>
<thead>
<tr>
<th>cetrimide</th>
<th>ENDPOINT</th>
<th>TEST DURATION (HR)</th>
<th>SPECIES</th>
<th>VALUE</th>
<th>SOURCE</th>
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</thead>
<tbody>
<tr>
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<td>Not Available</td>
<td>Not Available</td>
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<table>
<thead>
<tr>
<th>4-chloro-3,5-xylenol</th>
<th>ENDPOINT</th>
<th>TEST DURATION (HR)</th>
<th>SPECIES</th>
<th>VALUE</th>
<th>SOURCE</th>
</tr>
</thead>
<tbody>
<tr>
<td>LC50</td>
<td>96</td>
<td>Fish</td>
<td>0.36mg/L</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>EC50</td>
<td>48</td>
<td>Crustacea</td>
<td>7.7mg/L</td>
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</table>

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

Toxic to aquatic organisms.
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>ethanol</td>
<td>LOW (Half-life = 2.17 days)</td>
<td>LOW (Half-life = 5.08 days)</td>
</tr>
<tr>
<td>4-chloro-3,5-xylenol</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>ethanol</td>
<td>LOW (LogKOW = 0.31)</td>
</tr>
<tr>
<td>4-chloro-3,5-xylenol</td>
<td>LOW (LogKOW = 3.27)</td>
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</table>

Mobility in soil

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>Mobility</th>
</tr>
</thead>
<tbody>
<tr>
<td>ethanol</td>
<td>HIGH (KOC = 1)</td>
</tr>
<tr>
<td>4-chloro-3,5-xylenol</td>
<td>LOW (KOC = 1186)</td>
</tr>
</tbody>
</table>

SECTION 13 DISPOSAL CONSIDERATIONS

Waste treatment methods

Product / Packaging disposal
- Consult manufacturer for recycling options and recycle where possible.
- Consult State Land Waste Management Authority for disposal.
- Incinerate residue at an approved site.
- Recycle containers if possible, or dispose of in an authorised landfill.

SECTION 14 TRANSPORT INFORMATION

Labels Required

Marine Pollutant NO
HAZCHEM •2YE
### Land transport (ADG)

<table>
<thead>
<tr>
<th>UN number</th>
<th>1170</th>
</tr>
</thead>
<tbody>
<tr>
<td>UN proper shipping name</td>
<td>ETHANOL (ETHYL ALCOHOL) or ETHANOL SOLUTION (ETHYL ALCOHOL SOLUTION)</td>
</tr>
<tr>
<td>Transport hazard class(es)</td>
<td>Class 3</td>
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<tr>
<td></td>
<td>Subrisk Not Applicable</td>
</tr>
<tr>
<td>Packing group</td>
<td>II</td>
</tr>
<tr>
<td>Environmental hazard</td>
<td>Not Applicable</td>
</tr>
<tr>
<td>Special precautions for user</td>
<td>Special provisions 144</td>
</tr>
<tr>
<td></td>
<td>Limited quantity 1 L</td>
</tr>
</tbody>
</table>

### Air transport (ICAO-IATA / DGR)

<table>
<thead>
<tr>
<th>UN number</th>
<th>1170</th>
</tr>
</thead>
<tbody>
<tr>
<td>UN proper shipping name</td>
<td>Ethanol or Ethanol Solution</td>
</tr>
<tr>
<td>Transport hazard class(es)</td>
<td>ICAO/IATA Class 3</td>
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<tr>
<td></td>
<td>ICAO / IATA Subrisk Not Applicable</td>
</tr>
<tr>
<td></td>
<td>ERG Code 3L</td>
</tr>
<tr>
<td>Packing group</td>
<td>II</td>
</tr>
<tr>
<td>Environmental hazard</td>
<td>Not Applicable</td>
</tr>
<tr>
<td>Special precautions for user</td>
<td>Special provisions A3 A58 A180</td>
</tr>
<tr>
<td></td>
<td>Cargo Only Packing Instructions 364</td>
</tr>
<tr>
<td></td>
<td>Cargo Only Maximum Qty / Pack 60 L</td>
</tr>
<tr>
<td></td>
<td>Passenger and Cargo Packing Instructions 353</td>
</tr>
<tr>
<td></td>
<td>Passenger and Cargo Maximum Qty / Pack 5 L</td>
</tr>
<tr>
<td></td>
<td>Passenger and Cargo Limited Quantity Packing Instructions Y341</td>
</tr>
<tr>
<td></td>
<td>Passenger and Cargo Limited Maximum Qty / Pack 1 L</td>
</tr>
</tbody>
</table>

### Sea transport (IMDG-Code / GGVSee)

<table>
<thead>
<tr>
<th>UN number</th>
<th>1170</th>
</tr>
</thead>
<tbody>
<tr>
<td>UN proper shipping name</td>
<td>ETHANOL (ETHYL ALCOHOL) or ETHANOL SOLUTION (ETHYL ALCOHOL SOLUTION)</td>
</tr>
<tr>
<td>Transport hazard class(es)</td>
<td>IMDG Class 3</td>
</tr>
<tr>
<td></td>
<td>IMDG Subrisk Not Applicable</td>
</tr>
<tr>
<td>Packing group</td>
<td>II</td>
</tr>
<tr>
<td>Environmental hazard</td>
<td>Not Applicable</td>
</tr>
<tr>
<td>Special precautions for user</td>
<td>EMS Number F-E, S-D</td>
</tr>
<tr>
<td></td>
<td>Special provisions 144</td>
</tr>
<tr>
<td></td>
<td>Limited Quantities 1 L</td>
</tr>
</tbody>
</table>

### 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

- **ETHANOL (64-17-5) IS FOUND ON THE FOLLOWING REGULATORY LISTS**
  - Australia Exposure Standards
  - Australia Hazardous Chemical Information System (HCIS) - Hazardous Chemicals
  - Australia Inventory of Chemical Substances (AICS)

- **CETRIMIDE (8044-71-1) IS FOUND ON THE FOLLOWING REGULATORY LISTS**
  - Australia Inventory of Chemical Substances (AICS)
  - Australia Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP) - Appendix B (Part 3)
  - Australia Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP) - Appendix F (Part 3)
  - Australia Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP) - Schedule 5

- **4-CHLORO-3,5-XYLENOL (88-04-0) IS FOUND ON THE FOLLOWING REGULATORY LISTS**
  - Australia Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP) - Schedule 5
  - Australia Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP) - Schedule 6

Continued...
National Inventory Status

<table>
<thead>
<tr>
<th>National Inventory</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>Australia - AICS</td>
<td>Y</td>
</tr>
<tr>
<td>Canada - DSL</td>
<td>N (cetrimide)</td>
</tr>
<tr>
<td>Canada - NDSL</td>
<td>N (4-chloro-3,5-xylenol; cetrimide; ethanol)</td>
</tr>
<tr>
<td>China - IECSC</td>
<td>N (cetrimide)</td>
</tr>
<tr>
<td>Europe - EINEC / ELINCS / NLP</td>
<td>N (cetrimide)</td>
</tr>
<tr>
<td>Japan - ENCS</td>
<td>N (cetrimide)</td>
</tr>
<tr>
<td>Korea - KECI</td>
<td>N (cetrimide)</td>
</tr>
<tr>
<td>New Zealand - NZIoC</td>
<td>Y</td>
</tr>
<tr>
<td>Philippines - PICCS</td>
<td>Y</td>
</tr>
<tr>
<td>USA - TSCA</td>
<td>N (cetrimide)</td>
</tr>
</tbody>
</table>

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)

SECTION 16 OTHER INFORMATION

Revision Date 27/06/2017  
Initial Date 03/09/2006

Other information

Ingredients with multiple cas numbers

<table>
<thead>
<tr>
<th>Name</th>
<th>CAS No</th>
</tr>
</thead>
<tbody>
<tr>
<td>ethanol</td>
<td>64-17-5, 2348-46-1</td>
</tr>
<tr>
<td>4-chloro-3,5-xylenol</td>
<td>88-04-0, 1321-23-9</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.

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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