



## SAFETY DATA SHEET

### Hand Rub

According to Regulation (EC) No 1907/2006, Annex II, as amended. Commission Regulation (EU) No 2015/830 of 28 May 2015.

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

##### 1.1. Product identifier

**Product name** Hand Rub  
**Product number** 777003, 777010, 777011

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

**Identified uses** Liquid alcohol free hand rub.  
**Uses advised against** No specific uses advised against are identified.

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

**Supplier** The MazWell Group Ltd.  
 Units 11/14-15 Ardglen Industrial Estate,  
 Whitchurch, Hampshire,  
 RG28 7BB, United Kingdom  
 +44 (0)1256-893883  
 +44 (0)1256-893868  
 enquiries@themazwellgroup.com

##### 1.4. Emergency telephone number

**Emergency telephone** +44 (0)1256 893883 (Mon- Fri 9:00 am - 4:30 pm)

#### SECTION 2: Hazards identification

##### 2.1. Classification of the substance or mixture

###### Classification (EC 1272/2008)

**Physical hazards** Not Classified  
**Health hazards** Not Classified  
**Environmental hazards** Aquatic Chronic 3 - H412

##### 2.2. Label elements

**Hazard statements** H412 Harmful to aquatic life with long lasting effects.  
**Precautionary statements** P273 Avoid release to the environment.  
 P501 Dispose of contents/ container in accordance with national regulations.

##### 2.3. Other hazards

#### SECTION 3: Composition/information on ingredients

##### 3.2. Mixtures

## Hand Rub

<b>Quaternary ammonium compounds, benzyl-C12-16-alkyldimethyl, chlorides</b>	<b>0.25 - &lt;0.5%</b>
CAS number: 68424-85-1                      EC number: 270-325-2 M factor (Acute) = 10                      M factor (Chronic) = 1	
<b>Classification</b> Acute Tox. 4 - H302 Skin Corr. 1C - H314 Eye Dam. 1 - H318 Aquatic Acute 1 - H400 Aquatic Chronic 1 - H410	
<b>D-Gluconic acid, compound with N,N"-bis(4-chlorophenyl)-3,12-diimino-2,4,11,13-tetraazatetradecanediamidine (2:1)</b>	<b>0.25 - &lt;0.5%</b>
CAS number: 18472-51-0                      EC number: 242-354-0 M factor (Acute) = 10                      M factor (Chronic) = 1	
<b>Classification</b> Eye Dam. 1 - H318 Aquatic Acute 1 - H400 Aquatic Chronic 1 - H410	
<b>Didecyldimethylammonium chloride</b>	<b>0.25 - &lt;0.5%</b>
CAS number: 7173-51-5                      EC number: 230-525-2 M factor (Acute) = 10	
<b>Classification</b> Acute Tox. 4 - H302 Skin Corr. 1B - H314 Eye Dam. 1 - H318 Aquatic Acute 1 - H400 Aquatic Chronic 2 - H411	

The full text for all hazard statements is displayed in Section 16.

### SECTION 4: First aid measures

#### 4.1. Description of first aid measures

##### **General information**

Get medical attention immediately. Show this Safety Data Sheet to the medical personnel.

##### **Inhalation**

Remove affected person from source of contamination. Move affected person to fresh air and keep warm and at rest in a position comfortable for breathing. Maintain an open airway. Loosen tight clothing such as collar, tie or belt. When breathing is difficult, properly trained personnel may assist affected person by administering oxygen. Place unconscious person on their side in the recovery position and ensure breathing can take place.

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<b>Ingestion</b>	Move affected person to fresh air and keep warm and at rest in a position comfortable for breathing. Rinse mouth thoroughly with water. Give a few small glasses of water or milk to drink. Stop if the affected person feels sick as vomiting may be dangerous. Do not induce vomiting unless under the direction of medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Never give anything by mouth to an unconscious person. Place unconscious person on their side in the recovery position and ensure breathing can take place.
<b>Skin contact</b>	Rinse with water.
<b>Eye contact</b>	Rinse immediately with plenty of water. Remove any contact lenses and open eyelids wide apart. Continue to rinse for at least 10 minutes.
<b>Protection of first aiders</b>	First aid personnel should wear appropriate protective equipment during any rescue.

### 4.2. Most important symptoms and effects, both acute and delayed

<b>General information</b>	See Section 11 for additional information on health hazards. The severity of the symptoms described will vary dependent on the concentration and the length of exposure.
<b>Inhalation</b>	Prolonged inhalation of high concentrations may damage respiratory system.
<b>Ingestion</b>	Gastrointestinal symptoms, including upset stomach.
<b>Skin contact</b>	Prolonged contact may cause dryness of the skin.
<b>Eye contact</b>	May cause temporary eye irritation.

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

<b>Notes for the doctor</b>	Treat symptomatically.
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## SECTION 5: Firefighting measures

### 5.1. Extinguishing media

<b>Suitable extinguishing media</b>	Extinguish with alcohol-resistant foam, carbon dioxide, dry powder or water fog. Use fire-extinguishing media suitable for the surrounding fire.
<b>Unsuitable extinguishing media</b>	Do not use water jet as an extinguisher, as this will spread the fire.

### 5.2. Special hazards arising from the substance or mixture

<b>Specific hazards</b>	Containers can burst violently or explode when heated, due to excessive pressure build-up.
<b>Hazardous combustion products</b>	Thermal decomposition or combustion products may include the following substances: Harmful gases or vapours.

### 5.3. Advice for firefighters

<b>Protective actions during firefighting</b>	Avoid breathing fire gases or vapours. Evacuate area. Cool containers exposed to heat with water spray and remove them from the fire area if it can be done without risk. Cool containers exposed to flames with water until well after the fire is out. If a leak or spill has not ignited, use water spray to disperse vapours and protect men stopping the leak. Avoid discharge to the aquatic environment. Control run-off water by containing and keeping it out of sewers and watercourses. If risk of water pollution occurs, notify appropriate authorities.
<b>Special protective equipment for firefighters</b>	Wear positive-pressure self-contained breathing apparatus (SCBA) and appropriate protective clothing. Firefighter's clothing conforming to European standard EN469 (including helmets, protective boots and gloves) will provide a basic level of protection for chemical incidents.

## SECTION 6: Accidental release measures

### 6.1. Personal precautions, protective equipment and emergency procedures

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**Personal precautions** Do not touch or walk into spilled material. Keep unnecessary and unprotected personnel away from the spillage. Wear protective clothing as described in Section 8 of this safety data sheet. Ensure procedures and training for emergency decontamination and disposal are in place. Follow precautions for safe handling described in this safety data sheet. Wash thoroughly after dealing with a spillage.

### 6.2. Environmental precautions

**Environmental precautions** Avoid discharge into drains and the aquatic environment.

### 6.3. Methods and material for containment and cleaning up

**Methods for cleaning up** Wear protective clothing as described in Section 8 of this safety data sheet. Do not empty into drains. Absorb spillage with non-combustible, absorbent material. The contaminated absorbent may pose the same hazard as the spilled material. Collect and place in suitable waste disposal containers and seal securely. Label the containers containing waste and contaminated materials and remove from the area as soon as possible. Flush contaminated area with plenty of water. Wash thoroughly after dealing with a spillage. For waste disposal, see Section 13.

### 6.4. Reference to other sections

**Reference to other sections** For personal protection, see Section 8. See Section 11 for additional information on health hazards. See Section 12 for additional information on ecological hazards. For waste disposal, see Section 13.

## **SECTION 7: Handling and storage**

### 7.1. Precautions for safe handling

**Usage precautions** Read and follow manufacturer's recommendations. Keep away from food, drink and animal feeding stuffs. Wear protective clothing as described in Section 8 of this safety data sheet. Handle all packages and containers carefully to minimise spills. Do not handle broken packages without protective equipment. Avoid discharge to the aquatic environment. Keep container tightly sealed when not in use.

**Advice on general occupational hygiene** Wash promptly if skin becomes contaminated. Take off contaminated clothing. Wash contaminated clothing before reuse. Do not eat, drink or smoke when using this product. Wash at the end of each work shift and before eating, smoking and using the toilet. Change work clothing daily before leaving workplace.

### 7.2. Conditions for safe storage, including any incompatibilities

**Storage precautions** Store away from incompatible materials (see Section 10). Store in tightly-closed, original container in a dry, cool and well-ventilated place. Keep containers upright. Protect containers from damage. Bund storage facilities to prevent soil and water pollution in the event of spillage. The storage area floor should be leak-tight, jointless and not absorbent.

**Storage class** Miscellaneous hazardous material storage.

### 7.3. Specific end use(s)

**Specific end use(s)** The identified uses for this product are detailed in Section 1.2.

## **SECTION 8: Exposure controls/Personal protection**

### 8.1. Control parameters

**Ingredient comments** No exposure limits known for ingredient(s).

### 8.2. Exposure controls

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### Protective equipment



### Appropriate engineering controls

Provide adequate ventilation. Personal, workplace environment or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment. Use process enclosures, local exhaust ventilation or other engineering controls as the primary means to minimise worker exposure. Personal protective equipment should only be used if worker exposure cannot be controlled adequately by the engineering control measures. Ensure control measures are regularly inspected and maintained. Ensure operatives are trained to minimise exposure.

### Eye/face protection

Eyewear complying with an approved standard should be worn if a risk assessment indicates eye contact is possible. Personal protective equipment for eye and face protection should comply with European Standard EN166. Unless the assessment indicates a higher degree of protection is required, the following protection should be worn: Tight-fitting safety glasses.

### Hand protection

For users with sensitive skin, it is recommended that suitable protective gloves are worn. The most suitable glove should be chosen in consultation with the glove supplier/manufacturer, who can provide information about the breakthrough time of the glove material. To protect hands from chemicals, gloves should comply with European Standard EN374. Considering the data specified by the glove manufacturer, check during use that the gloves are retaining their protective properties and change them as soon as any deterioration is detected. Frequent changes are recommended.

### Other skin and body protection

Appropriate footwear and additional protective clothing complying with an approved standard should be worn if a risk assessment indicates skin contamination is possible.

### Hygiene measures

Provide eyewash station and safety shower. Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reuse. Clean equipment and the work area every day. Good personal hygiene procedures should be implemented. Wash at the end of each work shift and before eating, smoking and using the toilet. When using do not eat, drink or smoke. Warn cleaning personnel of any hazardous properties of the product.

### Respiratory protection

If ventilation is inadequate, suitable respiratory protection must be worn. Ensure all respiratory protective equipment is suitable for its intended use and is 'CE'-marked. Check that the respirator fits tightly and the filter is changed regularly.

### Environmental exposure controls

Keep container tightly sealed when not in use. Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

## SECTION 9: Physical and chemical properties

### 9.1. Information on basic physical and chemical properties

Appearance	Clear liquid.
Colour	Colourless.
Odour	Odourless.
Odour threshold	Not available.
pH	pH (concentrated solution): 6 - 8
Melting point	Not available.

## Hand Rub

<b>Initial boiling point and range</b>	>100°C
<b>Flash point</b>	Not available.
<b>Evaporation rate</b>	Not available.
<b>Upper/lower flammability or explosive limits</b>	Not available.
<b>Vapour pressure</b>	Not available.
<b>Vapour density</b>	Not available.
<b>Relative density</b>	Not available.
<b>Bulk density</b>	1 g/mL
<b>Solubility(ies)</b>	Not known.
<b>Partition coefficient</b>	Not available.
<b>Auto-ignition temperature</b>	Not available.
<b>Decomposition Temperature</b>	Not available.
<b>Viscosity</b>	Not available.
<b>Explosive properties</b>	Not considered to be explosive.
<b>Oxidising properties</b>	Does not meet the criteria for classification as oxidising.

### 9.2. Other information

**Other information** No information required.

## SECTION 10: Stability and reactivity

### 10.1. Reactivity

**Reactivity** See the other subsections of this section for further details.

### 10.2. Chemical stability

**Stability** Stable at normal ambient temperatures and when used as recommended. Stable under the prescribed storage conditions.

### 10.3. Possibility of hazardous reactions

**Possibility of hazardous reactions** No potentially hazardous reactions known.

### 10.4. Conditions to avoid

**Conditions to avoid** Avoid excessive heat for prolonged periods of time. Avoid freezing.

### 10.5. Incompatible materials

**Materials to avoid** No specific material or group of materials is likely to react with the product to produce a hazardous situation.

### 10.6. Hazardous decomposition products

**Hazardous decomposition products** Does not decompose when used and stored as recommended. Thermal decomposition or combustion products may include the following substances: Harmful gases or vapours.

## SECTION 11: Toxicological information

### 11.1. Information on toxicological effects

#### Acute toxicity - oral

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<b>Notes (oral LD<sub>50</sub>)</b>	Based on available data the classification criteria are not met.
<b><u>Acute toxicity - dermal</u></b>	
<b>Notes (dermal LD<sub>50</sub>)</b>	Based on available data the classification criteria are not met.
<b><u>Acute toxicity - inhalation</u></b>	
<b>Notes (inhalation LC<sub>50</sub>)</b>	Based on available data the classification criteria are not met.
<b><u>Skin corrosion/irritation</u></b>	
<b>Animal data</b>	Based on available data the classification criteria are not met.
<b><u>Serious eye damage/irritation</u></b>	
<b>Serious eye damage/irritation</b>	Based on available data the classification criteria are not met.
<b><u>Respiratory sensitisation</u></b>	
<b>Respiratory sensitisation</b>	Based on available data the classification criteria are not met.
<b><u>Skin sensitisation</u></b>	
<b>Skin sensitisation</b>	Based on available data the classification criteria are not met.
<b><u>Germ cell mutagenicity</u></b>	
<b>Genotoxicity - in vitro</b>	Based on available data the classification criteria are not met.
<b><u>Carcinogenicity</u></b>	
<b>Carcinogenicity</b>	Based on available data the classification criteria are not met.
<b>IARC carcinogenicity</b>	None of the ingredients are listed or exempt.
<b><u>Reproductive toxicity</u></b>	
<b>Reproductive toxicity - fertility</b>	Based on available data the classification criteria are not met.
<b>Reproductive toxicity - development</b>	Based on available data the classification criteria are not met.
<b><u>Specific target organ toxicity - single exposure</u></b>	
<b>STOT - single exposure</b>	Not classified as a specific target organ toxicant after a single exposure.
<b><u>Specific target organ toxicity - repeated exposure</u></b>	
<b>STOT - repeated exposure</b>	Not classified as a specific target organ toxicant after repeated exposure.
<b><u>Aspiration hazard</u></b>	
<b>Aspiration hazard</b>	Based on available data the classification criteria are not met.
<b>General information</b>	The severity of the symptoms described will vary dependent on the concentration and the length of exposure.
<b>Inhalation</b>	Prolonged inhalation of high concentrations may damage respiratory system.
<b>Ingestion</b>	Gastrointestinal symptoms, including upset stomach. Fumes from the stomach contents may be inhaled, resulting in the same symptoms as inhalation.
<b>Skin contact</b>	Prolonged contact may cause dryness of the skin.
<b>Eye contact</b>	May cause temporary eye irritation.
<b>Route of exposure</b>	Ingestion Inhalation Skin and/or eye contact
<b>Target organs</b>	No specific target organs known.
<b><u>Toxicological information on ingredients.</u></b>	

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### Quaternary ammonium compounds, benzyl-C12-16-alkyldimethyl, chlorides

#### Acute toxicity - oral

**Acute toxicity oral (LD<sub>50</sub> mg/kg)** 344.0

**Species** Rat

**Notes (oral LD<sub>50</sub>)** Supplier's information. Harmful if swallowed.

**ATE oral (mg/kg)** 344.0

#### Acute toxicity - dermal

**Acute toxicity dermal (LD<sub>50</sub> mg/kg)** 3,340.0

**Species** Rabbit

**Notes (dermal LD<sub>50</sub>)** Based on available data the classification criteria are not met. Supplier's information.

**ATE dermal (mg/kg)** 3,340.0

#### Acute toxicity - inhalation

**Notes (inhalation LC<sub>50</sub>)** Based on available data the classification criteria are not met.

#### Skin corrosion/irritation

**Animal data** Dose: 24, hours, Rabbit Corrosive. Based on available data the classification criteria are not met. Supplier's information.

#### Serious eye damage/irritation

**Serious eye damage/irritation** Corrosive to skin. Corrosivity to eyes is assumed. Supplier's information.

#### Skin sensitisation

**Skin sensitisation** Buehler test - Guinea pig: Not sensitising. Supplier's information.

#### Germ cell mutagenicity

**Genotoxicity - in vitro** Chromosome aberration: Negative. Based on available data the classification criteria are not met. Supplier's information.

**Genotoxicity - in vivo** Ames test: Negative. Based on available data the classification criteria are not met. Supplier's information.

#### Carcinogenicity

**Carcinogenicity** Based on available data the classification criteria are not met.

#### Reproductive toxicity

**Reproductive toxicity - fertility** Based on available data the classification criteria are not met.

**Reproductive toxicity - development** Based on available data the classification criteria are not met.

#### Specific target organ toxicity - single exposure

**STOT - single exposure** Based on available data the classification criteria are not met.

#### Specific target organ toxicity - repeated exposure



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**STOT - repeated exposure** Based on available data the classification criteria are not met.

### Aspiration hazard

**Aspiration hazard** Based on available data the classification criteria are not met.

### D-Gluconic acid, compound with N,N"-bis(4-chlorophenyl)-3,12-diimino-2,4,11,13-tetraazatetradecanediamidine (2:1)

#### Acute toxicity - oral

**Notes (oral LD<sub>50</sub>)** LD<sub>50</sub> >2000 mg/kg, Oral, Rat

#### Acute toxicity - dermal

**Notes (dermal LD<sub>50</sub>)** LD<sub>50</sub> >5000 mg/kg, Dermal, Rabbit

#### Skin corrosion/irritation

**Animal data** Dose: 500 mg, 4 hours, Rabbit Erythema/eschar score: Very slight erythema - barely perceptible (1). Oedema score: No oedema (0). Not irritating.

#### Serious eye damage/irritation

**Serious eye damage/irritation** Causes serious eye damage.

#### Skin sensitisation

**Skin sensitisation** Guinea pig maximization test (GPMT) - Guinea pig: Not sensitising.

#### Germ cell mutagenicity

**Genotoxicity - in vitro** Gene mutation: Negative.

**Genotoxicity - in vivo** Chromosome aberration: Negative.

#### Carcinogenicity

**Carcinogenicity** LOEL 5 mg/kg/day, Oral, Rat

### Didecyldimethylammonium chloride

#### Acute toxicity - oral

**Acute toxicity oral (LD<sub>50</sub> mg/kg)** 329.0

**Species** Rat

**Notes (oral LD<sub>50</sub>)** Harmful if swallowed.

**ATE oral (mg/kg)** 329.0

#### Skin corrosion/irritation

**Animal data** Dose: 0.5 mL, 1 hour, Rabbit Erythema/eschar score: Severe erythema (beef redness) to eschar formation preventing grading of erythema (4). Oedema score: Severe oedema - raised more than 1 mm and extending beyond area of exposure (4). Corrosive.

#### Serious eye damage/irritation

**Serious eye damage/irritation** Corrosive to skin. Corrosivity to eyes is assumed.

#### Skin sensitisation

**Skin sensitisation** Buehler test - Guinea pig: Not sensitising.

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### Germ cell mutagenicity

**Genotoxicity - in vitro** Gene mutation: Negative.

## SECTION 12: Ecological information

### 12.1. Toxicity

**Toxicity** Aquatic Chronic 3 - H412 Harmful to aquatic life with long lasting effects.

### Ecological information on ingredients.

#### Quaternary ammonium compounds, benzyl-C12-16-alkyldimethyl, chlorides

<b>Toxicity</b>	Aquatic Acute 1 - H400 Very toxic to aquatic life.
<b><u>Acute aquatic toxicity</u></b>	
<b>LE(C)<sub>50</sub></b>	0.01 < L(E)C <sub>50</sub> ≤ 0.1
<b>M factor (Acute)</b>	10
<b>Acute toxicity - fish</b>	LC <sub>50</sub> , 96 hours: 0.93 mg/l, Oncorhynchus mykiss (Rainbow trout) LC <sub>50</sub> , 96 hours: 0.28 mg/l, Pimephales promelas (Fat-head Minnow) LC <sub>50</sub> , 96 hours: 0.515 mg/l, Lepomis macrochirus (Bluegill) Supplier's information.
<b>Acute toxicity - aquatic invertebrates</b>	EC <sub>50</sub> , 48 hours: 0.016 mg/l, Daphnia magna Supplier's information.
<b>Acute toxicity - aquatic plants</b>	EC <sub>50</sub> , 72 hours: 0.049 mg/l, Pseudokirchneriella subcapitata Supplier's information.
<b>Acute toxicity - terrestrial</b>	LC <sub>50</sub> , 14 days: 7070 mg/kg, Eisenia Fetida (Earthworm) Supplier's information.
<b>Acute toxicity - microorganisms</b>	EC <sub>50</sub> , 3 hours: 7.75 mg/l, Activated sludge EC <sub>100</sub> , 96 hours: ~16 mg/l, Pseudomonas putida Supplier's information.
<b><u>Chronic aquatic toxicity</u></b>	
<b>M factor (Chronic)</b>	1
<b>Chronic toxicity - fish early life stage</b>	NOEC, 34 days: 0.032 mg/l, Pimephales promelas (Fat-head Minnow) Supplier's information.
<b>Chronic toxicity - aquatic invertebrates</b>	NOEC, 21 days: 0.0042 mg/l, Daphnia magna NOEC, 28 days: 520 mg/l, Chironomus sp.

#### D-Gluconic acid, compound with N,N"-bis(4-chlorophenyl)-3,12-diimino-2,4,11,13-tetraazatetradecanediamidine (2:1)

<b><u>Acute aquatic toxicity</u></b>	
<b>LE(C)<sub>50</sub></b>	0.01 < L(E)C <sub>50</sub> ≤ 0.1
<b>M factor (Acute)</b>	10
<b>Acute toxicity - fish</b>	LC <sub>50</sub> , 96 hours: 2.08 mg/l, Brachydanio rerio (Zebra Fish)
<b>Acute toxicity - aquatic invertebrates</b>	EC <sub>50</sub> , 48 hours: 0.087 mg/l, Daphnia magna

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<b>Acute toxicity - aquatic plants</b>	EC <sub>50</sub> , 72 hours: 0.038 mg/l, Desmodosmus subspicatus
<b>Acute toxicity - microorganisms</b>	EC <sub>50</sub> , 3 hours: 25 mg/l, Activated sludge
<b><u>Chronic aquatic toxicity</u></b>	
<b>M factor (Chronic)</b>	1
<b>Chronic toxicity - aquatic invertebrates</b>	NOEC, 21 days: 0.0206 mg/l, Daphnia magna

### Didecyldimethylammonium chloride

<b><u>Acute aquatic toxicity</u></b>	
<b>LE(C)<sub>50</sub></b>	0.01 < L(E)C <sub>50</sub> ≤ 0.1
<b>M factor (Acute)</b>	10
<b>Acute toxicity - fish</b>	LC <sub>50</sub> , 96 hours: 0.49 mg/l, Brachydanio rerio (Zebra Fish)
<b>Acute toxicity - aquatic invertebrates</b>	EC <sub>50</sub> , 48 hours: 0.029 mg/l, Daphnia magna
<b>Acute toxicity - aquatic plants</b>	EC <sub>50</sub> , 72 hours: 0.062 mg/l, Pseudokirchneriella subcapitata
<b><u>Chronic aquatic toxicity</u></b>	
<b>Chronic toxicity - aquatic invertebrates</b>	NOEC, 21 days: 0.021 mg/l, Daphnia magna

### 12.2. Persistence and degradability

**Persistence and degradability** The degradability of the product is not known.

### Ecological information on ingredients.

#### Quaternary ammonium compounds, benzyl-C12-16-alkyldimethyl, chlorides

<b>Persistence and degradability</b>	The product is readily biodegradable.
<b>Biodegradation</b>	- Degradation (>99%): 7 days Supplier's information.

#### D-Gluconic acid, compound with N,N"-bis(4-chlorophenyl)-3,12-diimino-2,4,11,13-tetraazatetradecanediamidine (2:1)

<b>Phototransformation</b>	Air - DT <sub>50</sub> : 9.1 hours Calculation method.
<b>Stability (hydrolysis)</b>	pH4, pH7, pH9 - Half-life : >1 year @ 25°C
<b>Biodegradation</b>	Water - Degradation 71%: 28 days

### Didecyldimethylammonium chloride

<b>Persistence and degradability</b>	The product is readily biodegradable.
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## Hand Rub

**Stability (hydrolysis)** pH4, pH7, pH9 - Half-life : >1 year @ 20°C

**Biodegradation** Water - Degradation 69%: 28 days

### 12.3. Bioaccumulative potential

**Bioaccumulative potential** No data available on bioaccumulation.

**Partition coefficient** Not available.

### Ecological information on ingredients.

#### Quaternary ammonium compounds, benzyl-C12-16-alkyldimethyl, chlorides

**Bioaccumulative potential** No data available on bioaccumulation.

#### D-Gluconic acid, compound with N,N"-bis(4-chlorophenyl)-3,12-diimino-2,4,11,13-tetraazatetradecanediamidine (2:1)

**Bioaccumulative potential** BCF: 42 L/Kg, Leuciscus idus (Golden orfe)

**Partition coefficient** log Pow: -1.81

#### Didecyldimethylammonium chloride

**Bioaccumulative potential** No data available on bioaccumulation.

**Partition coefficient** log Pow: 2.59

### 12.4. Mobility in soil

**Mobility** The product is water-soluble and may spread in water systems.

### Ecological information on ingredients.

#### Quaternary ammonium compounds, benzyl-C12-16-alkyldimethyl, chlorides

**Mobility** The product is partly soluble in water and may spread in the aquatic environment.

#### D-Gluconic acid, compound with N,N"-bis(4-chlorophenyl)-3,12-diimino-2,4,11,13-tetraazatetradecanediamidine (2:1)

**Mobility** The product is soluble in water.

**Adsorption/desorption coefficient** Soil - Koc: 72200 @ 25°C

**Surface tension** 50 mN/m @ 20°C

#### Didecyldimethylammonium chloride

**Mobility** The product is soluble in water.

**Surface tension** 25.82 mN/m @ 20°C

### 12.5. Results of PBT and vPvB assessment

**Results of PBT and vPvB assessment** This product does not contain any substances classified as PBT or vPvB.

### Ecological information on ingredients.

#### Quaternary ammonium compounds, benzyl-C12-16-alkyldimethyl, chlorides

## Hand Rub

**Results of PBT and vPvB assessment** This substance is not classified as PBT or vPvB according to current EU criteria.

**D-Gluconic acid, compound with N,N"-bis(4-chlorophenyl)-3,12-diimino-2,4,11,13-tetraazatetradecanediamidine (2:1)**

**Results of PBT and vPvB assessment** This substance is not classified as PBT or vPvB according to current EU criteria.

### Didecyldimethylammonium chloride

**Results of PBT and vPvB assessment** This substance is not classified as PBT or vPvB according to current EU criteria.

#### 12.6. Other adverse effects

**Other adverse effects** None known.

### **SECTION 13: Disposal considerations**

#### 13.1. Waste treatment methods

**General information** Reuse or recycle products wherever possible. Disposal of this product, process solutions, residues and by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any local authority requirements. When handling waste, the safety precautions applying to handling of the product should be considered. Care should be taken when handling emptied containers that have not been thoroughly cleaned or rinsed out. Empty containers or liners may retain some product residues and hence be potentially hazardous.

**Disposal methods** Do not empty into drains. Dispose of surplus products and those that cannot be recycled via a licensed waste disposal contractor. Waste, residues, empty containers, discarded work clothes and contaminated cleaning materials should be collected in designated containers, labelled with their contents. Waste packaging should be collected for reuse or recycling. Incineration or landfill should only be considered when recycling is not feasible.

### **SECTION 14: Transport information**

**General** The product is not covered by international regulations on the transport of dangerous goods (IMDG, IATA, ADR/RID).

#### 14.1. UN number

Not applicable.

#### 14.2. UN proper shipping name

Not applicable.

#### 14.3. Transport hazard class(es)

No transport warning sign required.

#### 14.4. Packing group

Not applicable.

#### 14.5. Environmental hazards

**Environmentally hazardous substance/marine pollutant**

No.

#### 14.6. Special precautions for user

## Hand Rub

Not applicable.

### 14.7. Transport in bulk according to Annex II of MARPOL and the IBC Code

**Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code** Not applicable.

### SECTION 15: Regulatory information

#### 15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

<b>National regulations</b>	Health and Safety at Work etc. Act 1974 (as amended). The Carriage of Dangerous Goods and Use of Transportable Pressure Equipment Regulations 2009 (SI 2009 No. 1348) (as amended) ["CDG 2009"]. EH40/2005 Workplace exposure limits.
<b>EU legislation</b>	Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH) (as amended). Commission Regulation (EU) No 2015/830 of 28 May 2015. Regulation (EC) No 1272/2008 of the European Parliament and of the Council of 16 December 2008 on classification, labelling and packaging of substances and mixtures (as amended).

#### 15.2. Chemical safety assessment

No chemical safety assessment has been carried out.

### SECTION 16: Other information

<b>Abbreviations and acronyms used in the safety data sheet</b>	ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road. ADN: European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways. RID: European Agreement concerning the International Carriage of Dangerous Goods by Rail. IATA: International Air Transport Association. ICAO: Technical Instructions for the Safe Transport of Dangerous Goods by Air. IMDG: International Maritime Dangerous Goods. CAS: Chemical Abstracts Service. ATE: Acute Toxicity Estimate. LC <sub>50</sub> : Lethal Concentration to 50 % of a test population. LD <sub>50</sub> : Lethal Dose to 50% of a test population (Median Lethal Dose). EC <sub>50</sub> : 50% of maximal Effective Concentration. PBT: Persistent, Bioaccumulative and Toxic substance. vPvB: Very Persistent and Very Bioaccumulative.
<b>Classification abbreviations and acronyms</b>	Aquatic Chronic = Hazardous to the aquatic environment (chronic)
<b>Classification procedures according to Regulation (EC) 1272/2008</b>	Aquatic Chronic 3 - H412: : Calculation method.
<b>Training advice</b>	Only trained personnel should use this material.
<b>Revision comments</b>	Revised formulation.
<b>Revision date</b>	17/04/2018

## Hand Rub

<b>Revision</b>	4
<b>Supersedes date</b>	02/10/2017
<b>SDS number</b>	6229
<b>Hazard statements in full</b>	H302 Harmful if swallowed. H314 Causes severe skin burns and eye damage. H318 Causes serious eye damage. H400 Very toxic to aquatic life. H410 Very toxic to aquatic life with long lasting effects. H411 Toxic to aquatic life with long lasting effects. H412 Harmful to aquatic life with long lasting effects.

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