

**SIRAFAN CLEAR CONC****Section: 1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING****1.1 Product identifier**

Product name : SIRAFAN CLEAR CONC

Product code : 119140E

Use of the  
Substance/Mixture : Cleaner and disinfectant

Substance type: : Mixture

**For professional users only.**

Product dilution information : 0.5 % - 3.0 %

**1.2 Relevant identified uses of the substance or mixture and uses advised against**Identified uses : General purpose cleaner. Spray and wipe manual process  
Surface disinfectant. Spray and rinse manual process  
Floor cleaner. Manual process  
Kitchen cleaner. Spray and wipe manual processRecommended restrictions  
on use : Reserved for industrial and professional use.**1.3 Details of the supplier of the safety data sheet**Company : Ecolab Ltd.  
PO Box 11; Winnington Avenue  
Northwich, Cheshire, United Kingdom CW8 4DX  
+ 44 (0)1606 74488  
ccs@ecolab.com**1.4 Emergency telephone number**Emergency telephone  
number : +441618841235  
+32-(0)3-575-5555 Trans-EuropeanPoison Information Centre  
telephone number : For medical professionals only: 0344 892 0111Date of Compilation/Revision : 14.04.2025  
Version : 2.5**Section: 2. HAZARDS IDENTIFICATION****2.1 Classification of the substance or mixture****Classification (REGULATION (EC) No 1272/2008)****Product AS SOLD**

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|                                      |      |
|--------------------------------------|------|
| Skin irritation, Category 2          | H315 |
| Serious eye damage, Category 1       | H318 |
| Acute aquatic toxicity, Category 1   | H400 |
| Chronic aquatic toxicity, Category 2 | H411 |

**Product AT USE DILUTION**

Not a hazardous substance or mixture.

**2.2 Label elements****Labelling (REGULATION (EC) No 1272/2008)****Product AS SOLD**

Hazard pictograms



Signal Word

: Danger

Hazard Statements

: H315  
H318  
H400  
H411Causes skin irritation.  
Causes serious eye damage.  
Very toxic to aquatic life.  
Toxic to aquatic life with long lasting effects.

Precautionary Statements

: **Prevention:**

P273

Avoid release to the environment.

P280

Wear protective gloves/ eye protection/ face protection.

**Response:**

P305 + P351 + P338

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P310

Immediately call a POISON CENTER/doctor.

Hazardous components which must be listed on the label:

benzalkonium chloride

Alcohols, C13, branched, ethoxylated

**Product AT USE DILUTION**

No hazard pictogram, no signal word, no hazard statement(s), no precautionary statement(s) required.

**2.3 Other hazards****Product AS SOLD**

None known.

**Section: 3. COMPOSITION/INFORMATION ON INGREDIENTS****3.2 Mixtures****Product AS SOLD****Hazardous components**

| Chemical Name | CAS-No.<br>EC-No.<br>REACH No. | Classification<br>REGULATION (EC) No 1272/2008 | Concentration<br>: [%] |
|---------------|--------------------------------|------------------------------------------------|------------------------|
|---------------|--------------------------------|------------------------------------------------|------------------------|

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|                                              |                                             |                                                                                                                                                                                                                                                                              |                |
|----------------------------------------------|---------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------|
| benzalkonium chloride                        | 68424-85-1<br>939-253-5<br>01-2119965180-41 | Acute toxicity Category 4; H302<br>Skin corrosion Category 1B; H314<br>Serious eye damage Category 1; H318<br>Acute aquatic toxicity Category 1; H400<br>Chronic aquatic toxicity Category 1; H410<br><br>M = 10<br><br>M(Chronic) = 1                                       | >= 5 - < 10    |
| Alcohols, C13, branched, ethoxylated         | 69011-36-5<br>POLYMER                       | Acute toxicity Category 4; H302<br>Serious eye damage Category 1; H318                                                                                                                                                                                                       | >= 1 - < 3     |
| Didecyl Dimethyl Ammonium Chloride           | 7173-51-5<br>230-525-2<br>01-2119945987-15  | Acute toxicity Category 4; H302<br>Skin corrosion Sub-category 1B; H314<br>Serious eye damage Category 1; H318<br>Acute aquatic toxicity Category 1; H400<br>Chronic aquatic toxicity Category 2; H411<br><br>M = 10                                                         | >= 0.25 - < 1  |
| Substances with a workplace exposure limit : |                                             |                                                                                                                                                                                                                                                                              |                |
| Ethylene Glycol                              | 107-21-1<br>203-473-3<br>01-2119456816-28   | Acute toxicity Category 4; H302<br>Specific target organ toxicity - repeated exposure Category 2; H373                                                                                                                                                                       | >= 0.1 - < 1   |
| sodium hydroxide                             | 1310-73-2<br>215-185-5<br>01-2119457892-27  | Skin corrosion Category 1A; H314<br>Corrosive to metals Category 1; H290<br><br>Skin corrosion Category 1A<br>H314 >= 5 %<br>Skin corrosion Category 1B<br>H314 2 - < 5 %<br>Skin irritation Category 2<br>H315 0.5 - < 2 %<br>Eye irritation Category 2<br>H319 0.5 - < 2 % | >= 0.1 - < 0.5 |

**Product AT USE DILUTION**  
**Hazardous components**

| Chemical Name                      | CAS-No.<br>EC-No.<br>REACH No.              | Classification<br>REGULATION (EC) No 1272/2008                                                                                                                                                                                         | Concentration<br>: [%] |
|------------------------------------|---------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------|
| benzalkonium chloride              | 68424-85-1<br>939-253-5<br>01-2119965180-41 | Acute toxicity Category 4; H302<br>Skin corrosion Category 1B; H314<br>Serious eye damage Category 1; H318<br>Acute aquatic toxicity Category 1; H400<br>Chronic aquatic toxicity Category 1; H410<br><br>M = 10<br><br>M(Chronic) = 1 | >= 0.1 - < 0.25        |
| Didecyl Dimethyl Ammonium Chloride | 7173-51-5<br>230-525-2<br>01-2119945987-15  | Acute toxicity Category 4; H302<br>Skin corrosion Sub-category 1B; H314<br>Serious eye damage Category 1; H318<br>Acute aquatic toxicity Category 1; H400<br>Chronic aquatic toxicity Category 2; H411<br><br>M = 10                   | >= 0.025 - < 0.1       |

For the full text of the H-Statements mentioned in this Section, see Section 16.

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**Section: 4. FIRST AID MEASURES**

**4.1 Description of first aid measures**

**Product AS SOLD**

- In case of eye contact : Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention immediately.
- In case of skin contact : Wash off immediately with plenty of water for at least 15 minutes. Use a mild soap if available. Get medical attention if irritation develops and persists.
- If swallowed : Rinse mouth with water. Do NOT induce vomiting. Never give anything by mouth to an unconscious person. If conscious, give 2 glasses of water. Get medical attention immediately.
- If inhaled : Remove to fresh air. Treat symptomatically. Get medical attention if symptoms occur.

**Product AT USE DILUTION**

- In case of eye contact : Rinse with plenty of water.
- In case of skin contact : Rinse with plenty of water.
- If swallowed : Rinse mouth. Get medical attention if symptoms occur.
- If inhaled : Get medical attention if symptoms occur.

**4.2 Most important symptoms and effects, both acute and delayed**

See Section 11 for more detailed information on health effects and symptoms.

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

- Treatment : Treat symptomatically.

**Section: 5. FIREFIGHTING MEASURES**

**Product AS SOLD**

**5.1 Extinguishing media**

- Suitable extinguishing media : Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
- Unsuitable extinguishing media : None known.

**5.2 Special hazards arising from the substance or mixture**

- Specific hazards during firefighting : Not flammable or combustible.
- Hazardous combustion products : Depending on combustion properties, decomposition products may include following materials:  
Carbon oxides  
nitrogen oxides (NOx)

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Hydrogen chloride  
metal oxides

**5.3 Advice for firefighters**

Special protective equipment for firefighters : Use personal protective equipment.

Further information : Collect contaminated fire extinguishing water separately. This must not be discharged into drains. Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations. In the event of fire and/or explosion do not breathe fumes.

**Section: 6. ACCIDENTAL RELEASE MEASURES**

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

**Product AS SOLD**

Advice for non-emergency personnel : Ensure adequate ventilation. Keep people away from and upwind of spill/leak. Avoid inhalation, ingestion and contact with skin and eyes. When workers are facing concentrations above the exposure limit they must use appropriate certified respirators. Ensure clean-up is conducted by trained personnel only. Refer to protective measures listed in sections 7 and 8.

Advice for emergency responders : If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials.

**Product AT USE DILUTION**

Advice for non-emergency personnel : Ensure clean-up is conducted by trained personnel only. Refer to protective measures listed in sections 7 and 8.

Advice for emergency responders : If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials.

**6.2 Environmental precautions**

**Product AS SOLD**

Environmental precautions : Do not allow contact with soil, surface or ground water.

**Product AT USE DILUTION**

Environmental precautions : Do not allow contact with soil, surface or ground water.

**6.3 Methods and materials for containment and cleaning up**

**Product AS SOLD**

Methods for cleaning up : Stop leak if safe to do so. Contain spillage, and then collect with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see section 13). Flush away traces with water. For large spills, dike spilled material or otherwise contain material to ensure runoff does not reach a waterway.

**Product AT USE DILUTION**

Methods for cleaning up : Stop leak if safe to do so. Contain spillage, and then collect with

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non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see section 13). Flush away traces with water. For large spills, dike spilled material or otherwise contain material to ensure runoff does not reach a waterway.

**6.4 Reference to other sections**

See Section 1 for emergency contact information.  
For personal protection see section 8.  
See Section 13 for additional waste treatment information.

**Section: 7. HANDLING AND STORAGE**

**7.1 Precautions for safe handling**

**Product AS SOLD**

Advice on safe handling : Avoid contact with skin and eyes. Do not get in eyes, on skin, or on clothing. Use only with adequate ventilation. Wash hands thoroughly after handling. Do not breathe spray, vapour. In case of mechanical malfunction, or if in contact with unknown dilution of product, wear full Personal Protective Equipment (PPE).

Hygiene measures : Handle in accordance with good industrial hygiene and safety practice. Remove and wash contaminated clothing before re-use. Wash face, hands and any exposed skin thoroughly after handling. Provide suitable facilities for quick drenching or flushing of the eyes and body in case of contact or splash hazard.

**Product AT USE DILUTION**

Advice on safe handling : Use only with adequate ventilation. Wash hands thoroughly after handling. In case of mechanical malfunction, or if in contact with unknown dilution of product, wear full Personal Protective Equipment (PPE).

Hygiene measures : Handle in accordance with good industrial hygiene and safety practice. Remove and wash contaminated clothing before re-use. Wash face, hands and any exposed skin thoroughly after handling.

**7.2 Conditions for safe storage, including any incompatibilities**

**Product AS SOLD**

Requirements for storage areas and containers : Protect from frost, heat and sunlight. Store at room temperature in the original container. Keep out of reach of children. Keep container tightly closed. Store in suitable labeled containers.

Storage temperature : -5 °C to 40 °C

**Product AT USE DILUTION**

Requirements for storage areas and containers : Protect from frost, heat and sunlight. Store at room temperature in the original container. Keep out of reach of children. Keep container tightly closed. Store in suitable labeled containers.

**7.3 Specific end uses**

**Product AS SOLD**

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Specific use(s) : General purpose cleaner. Spray and wipe manual process  
 Surface disinfectant. Spray and rinse manual process  
 Floor cleaner. Manual process  
 Kitchen cleaner. Spray and wipe manual process

**Section: 8. EXPOSURE CONTROLS/PERSONAL PROTECTION****8.1 Control parameters****Product AS SOLD****Occupational Exposure Limits**

| Components          | CAS-No.   | Value type (Form of exposure)                                                                                                                           | Control parameters  | Basis    |
|---------------------|-----------|---------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------|----------|
| Ethylene Glycol     | 107-21-1  | TWA (particles)                                                                                                                                         | 10 mg/m3            | UKCOSSTD |
| Further information | Sk        | Can be absorbed through the skin. The assigned substances are those for which there are concerns that dermal absorption will lead to systemic toxicity. |                     |          |
|                     |           | TWA (Vapour.)                                                                                                                                           | 20 ppm<br>52 mg/m3  | UKCOSSTD |
| Further information | Sk        | Can be absorbed through the skin. The assigned substances are those for which there are concerns that dermal absorption will lead to systemic toxicity. |                     |          |
|                     |           | STEL (Vapour.)                                                                                                                                          | 40 ppm<br>104 mg/m3 | UKCOSSTD |
| Further information | Sk        | Can be absorbed through the skin. The assigned substances are those for which there are concerns that dermal absorption will lead to systemic toxicity. |                     |          |
| sodium hydroxide    | 1310-73-2 | STEL                                                                                                                                                    | 2 mg/m3             | UKCOSSTD |

**DNEL**

|                  |   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|------------------|---|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Ethylene Glycol  | : | <p>End Use: Workers<br/>         Exposure routes: Skin contact<br/>         Potential health effects: Long-term systemic effects<br/>         Value: 106 mg/cm2</p> <p>End Use: Workers<br/>         Exposure routes: Inhalation<br/>         Potential health effects: Long-term systemic effects<br/>         Value: 35 mg/m3</p> <p>End Use: Consumers<br/>         Exposure routes: Skin contact<br/>         Potential health effects: Long-term systemic effects<br/>         Value: 53 mg/cm2</p> <p>End Use: Consumers<br/>         Exposure routes: Inhalation<br/>         Potential health effects: Long-term systemic effects<br/>         Value: 7 mg/m3</p> |
| sodium hydroxide | : | <p>End Use: Workers<br/>         Exposure routes: Inhalation<br/>         Potential health effects: Long-term local effects<br/>         Value: 1 mg/m3</p> <p>End Use: Consumers<br/>         Exposure routes: Inhalation<br/>         Potential health effects: Long-term local effects<br/>         Value: 1 mg/m3</p>                                                                                                                                                                                                                                                                                                                                                 |

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## PNEC

|                 |   |                                           |
|-----------------|---|-------------------------------------------|
| Ethylene Glycol | : | Fresh water<br>Value: 10 mg/l             |
|                 |   | Marine water<br>Value: 1 mg/l             |
|                 |   | Water<br>Value: 10 mg/l                   |
|                 |   | Fresh water sediment<br>Value: 20.9 mg/kg |
|                 |   | Water<br>Value: 1995.5 mg/l               |
|                 |   | Soil<br>Value: 1.53 mg/kg                 |

**8.2 Exposure controls****Product AS SOLD****Appropriate engineering controls**

Engineering measures : Good general ventilation should be sufficient to control worker exposure to airborne contaminants.

**Individual protection measures**

Hygiene measures : Handle in accordance with good industrial hygiene and safety practice. Remove and wash contaminated clothing before re-use. Wash face, hands and any exposed skin thoroughly after handling. Provide suitable facilities for quick drenching or flushing of the eyes and body in case of contact or splash hazard.

Eye/face protection (EN 166) : Safety goggles  
Face-shield

Hand protection (EN 374) : Recommended preventive skin protection  
Gloves  
Nitrile rubber  
butyl-rubber  
Breakthrough time: 1 – 4 hours  
Minimum thickness for butyl-rubber 0.3 mm for nitrile rubber 0.2 mm or equivalent (please refer to the gloves manufacturer/distributor for advise).  
Gloves should be discarded and replaced if there is any indication of degradation or chemical breakthrough.

Skin and body protection (EN 14605) : No special protective equipment required.

Respiratory protection (EN 143, 14387) : None required if airborne concentrations are maintained below the exposure limit listed in Exposure Limit Information. Use certified respiratory protection equipment meeting EU requirements(89/656/EEC, (EU) 2016/425), or equivalent, when

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respiratory risks cannot be avoided or sufficiently limited by technical means of collective protection or by measures, methods or procedures of work organization.

**Product AT USE DILUTION****Appropriate engineering controls**

Engineering measures : Good general ventilation should be sufficient to control worker exposure to airborne contaminants.

**Individual protection measures**

Hygiene measures : Handle in accordance with good industrial hygiene and safety practice. Remove and wash contaminated clothing before re-use. Wash face, hands and any exposed skin thoroughly after handling.

Eye/face protection (EN 166) : No special protective equipment required.

Hand protection (EN 374) : No special protective equipment required.

Skin and body protection (EN 14605) : No special protective equipment required.

Respiratory protection (EN 143, 14387) : None required if airborne concentrations are maintained below the exposure limit listed in Exposure Limit Information. Use certified respiratory protection equipment meeting EU requirements(89/656/EEC, (EU) 2016/425), or equivalent, when respiratory risks cannot be avoided or sufficiently limited by technical means of collective protection or by measures, methods or procedures of work organization.

**Environmental exposure controls**

General advice : Consider the provision of containment around storage vessels.

**Section: 9. PHYSICAL AND CHEMICAL PROPERTIES****9.1 Information on basic physical and chemical properties**

|                                         | <b>Product AS SOLD</b>                                 | <b>Product AT USE DILUTION</b> |
|-----------------------------------------|--------------------------------------------------------|--------------------------------|
| Appearance                              | : liquid                                               | liquid                         |
| Colour                                  | : clear, light yellow                                  | colourless                     |
| Odour                                   | : slight                                               | odourless                      |
| pH                                      | : 11.9 - 12.9, 100 %                                   | 8.5 - 10.5                     |
| Flash point                             | : Not applicable.                                      |                                |
| Odour Threshold                         | : Not applicable and/or not determined for the mixture |                                |
| Melting point/freezing point            | : Not applicable and/or not determined for the mixture |                                |
| Initial boiling point and boiling range | : Not applicable and/or not determined for the mixture |                                |
| Evaporation rate                        | : Not applicable and/or not determined for the mixture |                                |
| Flammability (solid, gas)               | : Not applicable and/or not determined for the mixture |                                |

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|                                        |                                                            |
|----------------------------------------|------------------------------------------------------------|
| Upper explosion limit                  | : Not applicable and/or not determined for the mixture     |
| Lower explosion limit                  | : Not applicable and/or not determined for the mixture     |
| Vapour pressure                        | : Not applicable and/or not determined for the mixture     |
| Relative vapour density                | : Not applicable and/or not determined for the mixture     |
| Relative density                       | : 1.046 - 1.056                                            |
| Water solubility                       | : soluble                                                  |
| Solubility in other solvents           | : Not applicable and/or not determined for the mixture     |
| Partition coefficient: n-octanol/water | : Not applicable and/or not determined for the mixture     |
| Auto-ignition temperature              | : Not applicable and/or not determined for the mixture     |
| Thermal decomposition                  | : Not applicable and/or not determined for the mixture     |
| Viscosity, kinematic                   | : Not applicable and/or not determined for the mixture     |
| Explosive properties                   | : Not applicable and/or not determined for the mixture     |
| Oxidizing properties                   | : The substance or mixture is not classified as oxidizing. |

**9.2 Other information**

Not applicable and/or not determined for the mixture

**Section: 10. STABILITY AND REACTIVITY**

**Product AS SOLD**

**10.1 Reactivity**

No dangerous reaction known under conditions of normal use.

**10.2 Chemical stability**

Stable under normal conditions.

**10.3 Possibility of hazardous reactions**

No dangerous reaction known under conditions of normal use.

**10.4 Conditions to avoid**

None known.

**10.5 Incompatible materials**

Acids

**10.6 Hazardous decomposition products**

In the event of fire, see Section 5

**Section: 11. TOXICOLOGICAL INFORMATION**

**11.1 Information on toxicological effects**

**Product AS SOLD**

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Information on likely routes of exposure : Inhalation, Eye contact, Skin contact

**Product**

Acute oral toxicity : Acute toxicity estimate : > 2,000 mg/kg

Acute inhalation toxicity : There is no data available for this product.

Acute dermal toxicity : There is no data available for this product.

Skin corrosion/irritation : Skin irritation

Serious eye damage/eye irritation : There is no data available for this product.

Respiratory or skin sensitization : There is no data available for this product.

Carcinogenicity : There is no data available for this product.

Reproductive effects : There is no data available for this product.

Germ cell mutagenicity : There is no data available for this product.

Teratogenicity : There is no data available for this product.

STOT - single exposure : There is no data available for this product.

STOT - repeated exposure : There is no data available for this product.

Aspiration toxicity : There is no data available for this product.

**Components**

Acute oral toxicity : benzalkonium chloride LD50 rat: 344 mg/kg

Alcohols, C13, branched, ethoxylated LD50 rat: > 500 mg/kg

**Components**

Acute dermal toxicity : benzalkonium chloride LD50 rabbit: 3,340 mg/kg

Didecyl Dimethyl Ammonium Chloride LD50 rabbit: 2,930 mg/kg

Ethylene Glycol LD50 rabbit: 10,600 mg/kg

**Potential Health Effects**

**Product AS SOLD**

Eyes : Causes serious eye damage.

Skin : Causes skin irritation.

Ingestion : Health injuries are not known or expected under normal use.

Inhalation : Health injuries are not known or expected under normal use.

Chronic Exposure : Health injuries are not known or expected under normal use.

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**Product AT USE DILUTION**

|                  |                                                               |
|------------------|---------------------------------------------------------------|
| Eyes             | : Health injuries are not known or expected under normal use. |
| Skin             | : Health injuries are not known or expected under normal use. |
| Ingestion        | : Health injuries are not known or expected under normal use. |
| Inhalation       | : Health injuries are not known or expected under normal use. |
| Chronic Exposure | : Health injuries are not known or expected under normal use. |

**Experience with human exposure**

**Product AS SOLD**

|              |                                  |
|--------------|----------------------------------|
| Eye contact  | : Redness, Pain, Corrosion       |
| Skin contact | : Redness, Irritation            |
| Ingestion    | : No symptoms known or expected. |
| Inhalation   | : No symptoms known or expected. |

**Product AT USE DILUTION**

|              |                                  |
|--------------|----------------------------------|
| Eye contact  | : No symptoms known or expected. |
| Skin contact | : No symptoms known or expected. |
| Ingestion    | : No symptoms known or expected. |
| Inhalation   | : No symptoms known or expected. |

**Section: 12. ECOLOGICAL INFORMATION**

**12.1 Toxicity**

**Product AS SOLD**

|                       |                                                                                |
|-----------------------|--------------------------------------------------------------------------------|
| Environmental Effects | : Very toxic to aquatic life. Toxic to aquatic life with long lasting effects. |
|-----------------------|--------------------------------------------------------------------------------|

**Product AT USE DILUTION**

|                       |                                                       |
|-----------------------|-------------------------------------------------------|
| Environmental Effects | : This product has no known ecotoxicological effects. |
|-----------------------|-------------------------------------------------------|

**Product AS SOLD  
Product**

|                                                     |                     |
|-----------------------------------------------------|---------------------|
| Toxicity to fish                                    | : no data available |
| Toxicity to daphnia and other aquatic invertebrates | : no data available |
| Toxicity to algae                                   | : no data available |

**Components**

|                  |                                                              |
|------------------|--------------------------------------------------------------|
| Toxicity to fish | : Alcohols, C13, branched, ethoxylated96 h LC50 Fish: 3 mg/l |
|                  | Didecyl Dimethyl Ammonium Chloride96 h LC50 Fish: > 1 mg/l   |
|                  | Ethylene Glycol96 h LC50: 72,860 mg/l                        |

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**Components**

Toxicity to daphnia and other aquatic invertebrates : benzalkonium chloride 48 h EC50 Daphnia magna (Water flea): 0.016 mg/l

Alcohols, C13, branched, ethoxylated 48 h EC50 Daphnia magna (Water flea): 1.5 mg/l

Didecyl Dimethyl Ammonium Chloride 48 h EC50 Daphnia magna (Water flea): 0.029 mg/l

Ethylene Glycol 48 h EC50: > 100 mg/l

sodium hydroxide 48 h EC50 Daphnia magna (Water flea): 40 mg/l

**Components**

Toxicity to algae : Didecyl Dimethyl Ammonium Chloride 72 h EC50 Pseudokirchneriella subcapitata (algae): 0.062 mg/l

Ethylene Glycol 96 h EC50: 6,500 mg/l

**12.2 Persistence and degradability**

**Product**

Biodegradability : The surfactants contained in the product are biodegradable according to the requirements of the detergent regulation 648/2004/EC

**Components**

Biodegradability : benzalkonium chloride Result: Biodegradable

Alcohols, C13, branched, ethoxylated Result: Biodegradable

Didecyl Dimethyl Ammonium Chloride Result: Biodegradable

Ethylene Glycol Result: Readily biodegradable.

sodium hydroxide Result: Not applicable - inorganic

**12.3 Bioaccumulative potential**

no data available

**12.4 Mobility in soil**

no data available

**12.5 Results of PBT and vPvB assessment**

**Product**

Assessment : This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

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**12.6 Other adverse effects**

no data available

**Section: 13. DISPOSAL CONSIDERATIONS**

Dispose of in accordance with the European Directives on waste and hazardous waste. Waste codes should be assigned by the user, preferably in discussion with the waste disposal authorities.

**13.1 Waste treatment methods**

**Product AS SOLD**

- |                                   |   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|-----------------------------------|---|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Product                           | : | Do not contaminate storm water drains, natural waterways or soil with chemical or used container. Where possible recycling is preferred to disposal or incineration. If recycling is not practicable, dispose of contents/container in accordance with local regulations. Dispose of wastes in an approved waste disposal facility.                                                                                                                                                 |
| Contaminated packaging            | : | Dispose of as unused product. Empty containers should be taken to an approved waste handling site for recycling or disposal. Do not re-use empty containers. Dispose of in accordance with local, state, and federal regulations.                                                                                                                                                                                                                                                   |
| Guidance for Waste Code selection | : | Organic wastes containing dangerous substances. If this product is used in any further processes, the final user must redefine and assign the most appropriate European Waste Catalogue Code. It is the responsibility of the waste generator to determine the toxicity and physical properties of the material generated to determine the proper waste identification and disposal methods in compliance with applicable European (EU Directive 2008/98/EC) and local regulations. |

**Product AT USE DILUTION**

- |                        |   |                                                                                                                                                                                                                                                                                                                                     |
|------------------------|---|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Product                | : | Do not contaminate storm water drains, natural waterways or soil with chemical or used container. Where possible recycling is preferred to disposal or incineration. If recycling is not practicable, dispose of contents/container in accordance with local regulations. Dispose of wastes in an approved waste disposal facility. |
| Contaminated packaging | : | Dispose of as unused product. Empty containers should be taken to an approved waste handling site for recycling or disposal. Do not re-use empty containers. Dispose of in accordance with local, state, and federal regulations.                                                                                                   |

**Section: 14. TRANSPORT INFORMATION**

**Product AS SOLD**

The shipper/consignor/sender is responsible to ensure that the packaging, labeling, and markings are in compliance with the selected mode of transport.

**Land transport (ADR/ADN/RID)**

- |                              |   |                                                                                       |
|------------------------------|---|---------------------------------------------------------------------------------------|
| 14.1 UN number               | : | 3082                                                                                  |
| 14.2 UN proper shipping name | : | ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.<br>(quaternary ammonium compound) |
| 14.3 Transport hazard        | : | 9                                                                                     |



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Take note of Dir 94/33/EC on the protection of young people at work.

Other regulations : The Chemicals (Hazard Information and Packaging for Supply) Regulations.  
The Control of Substances Hazardous to Health Regulations.  
Health and Safety at Work Act.

**15.2 Chemical Safety Assessment**

No Chemical Safety Assessment has been carried out on the product.

**Section: 16. OTHER INFORMATION****Procedure used to derive the classification according to REGULATION (EC) No 1272/2008**

| Classification                   | Justification                       |
|----------------------------------|-------------------------------------|
| Skin irritation 2, H315          | Based on product data or assessment |
| Serious eye damage 1, H318       | Based on product data or assessment |
| Acute aquatic toxicity 1, H400   | Calculation method                  |
| Chronic aquatic toxicity 2, H411 | Calculation method                  |

**Full text of H-Statements**

|      |                                                                    |
|------|--------------------------------------------------------------------|
| H290 | May be corrosive to metals.                                        |
| H302 | Harmful if swallowed.                                              |
| H314 | Causes severe skin burns and eye damage.                           |
| H318 | Causes serious eye damage.                                         |
| H373 | May cause damage to organs through prolonged or repeated exposure. |
| 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.                   |

**Full text of other abbreviations**

ADN - European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways; ADR - European Agreement concerning the International Carriage of Dangerous Goods by Road; AIIIC - Australian Inventory of Industrial Chemicals; ASTM - American Society for the Testing of Materials; bw - Body weight; CLP - Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DSL - Domestic Substances List (Canada); ECHA - European Chemicals Agency; EC-Number - European Community number; ECx - Concentration associated with x% response; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; n.o.s. - Not Otherwise Specified; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; RID - Regulations concerning the International Carriage of Dangerous Goods by Rail; SADT - Self-Accelerating Decomposition

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Temperature; SDS - Safety Data Sheet; SVHC - Substance of Very High Concern; TCSI - Taiwan Chemical Substance Inventory; TECI - Thailand Existing Chemicals Inventory; TRGS - Technical Rule for Hazardous Substances; TSCA - Toxic Substances Control Act (United States); UN - United Nations; vPvB - Very Persistent and Very Bioaccumulative

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Numbers quoted in the MSDS are given in the format: 1,000,000 = 1 million and 1,000 = 1 thousand. 0.1 = 1 tenth and 0.001 = 1 thousandth

REVISED INFORMATION: Significant changes to regulatory or health information for this revision is indicated by a bar in the left-hand margin of the SDS.

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

**Annex: Exposure Scenarios**