SAFETY DATA SHEET according to Regulation (EC) No. 1907/2006

ACTICHLOR PLUS

Section: 1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1 Product identifier

<table>
<thead>
<tr>
<th>Product name</th>
<th>ACTICHLOR PLUS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Product code</td>
<td>111258E</td>
</tr>
<tr>
<td>Use of the Substance/Mixture</td>
<td>Surface Disinf ectant</td>
</tr>
<tr>
<td>Substance type:</td>
<td>Mixture</td>
</tr>
</tbody>
</table>

For professional users only.

Product dilution information : No dilution information provided.

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

Identified uses : Surface disinfectant. Manual process

Recommended 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 : Food & Beverage, Institutional, Agriculture, Textile Hygiene:
Northwich: +44 (0)1606 74488
Healthcare Leeds: +44 (0)113 232 2480
Healthcare Swansea: +44 (0)1252 717616

Poison Information Centre telephone number : Not Available

Date of Compilation/Revision : 21.10.2014
Version : 1.0

Section: 2. HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

Classification (REGULATION (EC) No 1272/2008)

<table>
<thead>
<tr>
<th>Eye irritation</th>
<th>Specific target organ toxicity - single exposure</th>
<th>Respiratory system</th>
<th>Acute aquatic toxicity</th>
<th>Chronic aquatic toxicity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Category 2</td>
<td>Category 3, single exposure</td>
<td>Category 3</td>
<td>Category 1</td>
<td>Category 1</td>
</tr>
</tbody>
</table>

H319  H35  H335  H400  H410

Classification (67/548/EEC, 1999/45/EC)
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Xn: HARMFUL R22
N: DANGEROUS FOR THE ENVIRONMENT R31
                                        R36/37 R50/53

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

2.2 Label elements

Labelling (REGULATION (EC) No 1272/2008)

Hazard pictograms :  

Signal Word : Warning

Hazard Statements : H319 Causes serious eye irritation.
                   : H335 May cause respiratory irritation.
                   : H410 Very toxic to aquatic life with long lasting effects.

Supplemental Hazard Statements : EUH031 Contact with acids liberates toxic gas.

Precautionary Statements : Prevention:
                           : P273 Avoid release to the environment.
                           : P280e Wear eye protection/face protection.

Hazardous components which must be listed on the label:
troclosene sodium
Arylsulfonates

2.3 Other hazards

Mixing this product with acid or ammonia releases chlorine gas.

Section: 3. COMPOSITION/INFORMATION ON INGREDIENTS

3.2 Mixtures

Hazardous components

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>troclosene sodium</td>
<td>2893-78-9 220-767-7</td>
<td>E-N-O-Xi-Xn; R02-R22; R31-R36/37-R08-R50/53</td>
<td>Oxidizing solids Category 2; H272 Acute toxicity Category 4; H302 Eye irritation Category 2; H319 Specific target organ toxicity - single exposure Category 3; H335 Acute aquatic</td>
<td>&gt;= 50 - &lt;= 100</td>
</tr>
</tbody>
</table>
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<table>
<thead>
<tr>
<th>Toxicity Category 1: H400 Chronic aquatic toxicity Category 1: H410</th>
</tr>
</thead>
<tbody>
<tr>
<td>adipic acid 124-04-9 204-673-3 Xi; R36 Eye irritation Category 2: H319 &gt;= 10 - &lt; 20</td>
</tr>
<tr>
<td>Arylsulfonates 12068-03-0 235-088-1 R36 Serious eye damage/eye irritation Category 2: H318 Skin corrosion/irritation Category 2: H315 Specific target organ toxicity - single exposure Category 3: H335 &gt;= 5 - &lt; 10</td>
</tr>
<tr>
<td>Sodium Fatty Acid Sarcosides 137-16-6 205-281-5 Xi-T; R36-R23 Acute toxicity Category 2: H330 Eye irritation Category 2: H319 &gt;= 1 - &lt; 2.5</td>
</tr>
</tbody>
</table>

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

Section: 4. FIRST AID MEASURES

4.1 Description of first aid measures

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.

In case of skin contact: Rinse with plenty of water.

If swallowed: Rinse mouth. Get medical attention if symptoms occur. Do NOT induce vomiting.

If inhaled: Remove to fresh air. Treat symptomatically. 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

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 : Exposure to decomposition products may be a hazard to health.

Hazardous combustion products : Decomposition products may include the following materials:
Carbon oxides
Nitrogen oxides (NOx)
Sulphur oxides
Oxides of phosphorus

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

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

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

6.3 Methods and materials for containment and cleaning up

Methods for cleaning up : Sweep up and shovel into suitable containers for disposal.

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

Advice on safe handling : Avoid contact with skin and eyes. Do not breathe dust/fume/gas/mist/vapours/spray. Use only with adequate ventilation. Wash hands thoroughly after handling. Mixing this product with acid or ammonia releases chlorine gas.

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
7.2 Conditions for safe storage, including any incompatibilities

Requirements for storage areas and containers: Keep out of reach of children. Keep container tightly closed. Store in suitable labeled containers.

Storage temperature: 0 °C to 25 °C

7.3 Specific end uses

Specific use(s): Surface disinfectant. Manual process

Section: 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters

Occupational Exposure Limits

Contains no substances with occupational exposure limit values.

8.2 Exposure controls

Appropriate engineering controls

Engineering measures: Effective exhaust ventilation system. Maintain air concentrations below occupational exposure standards.

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): Safety glasses with side-shields

Hand protection (EN 374): Gloves

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, 89/686/EEC), 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
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Appearance : solid
Colour : white
Odour : Chlorine
pH : 5.0 - 6.0, 1 %
Flash point : Not applicable.
Odour Threshold : no data available
Melting point/freezing point : no data available
Initial boiling point and boiling range : no data available
Evaporation rate : no data available
Flammability (solid, gas) : no data available
Upper explosion limit : no data available
Lower explosion limit : no data available
Vapour pressure : no data available
Relative vapour density : no data available
Relative density : no data available
Water solubility : soluble
Solubility in other solvents : no data available
Partition coefficient: n-octanol/water : no data available
Auto-ignition temperature : no data available
Thermal decomposition : no data available
Viscosity, kinematic : no data available
Explosive properties : no data available
Oxidizing properties : The substance or mixture is not classified as oxidizing.

9.2 Other information

no data available

Section: 10. STABILITY AND REACTIVITY

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

Mixing this product with acid or ammonia releases chlorine gas.

10.4 Conditions to avoid

None known.
10.5 Incompatible materials

Acids

10.6 Hazardous decomposition products

Decomposition products may include the following materials:
Carbon oxides
nitrogen oxides (NOx)
Sulphur oxides
Oxides of phosphorus

Section: 11. TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

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

Toxicity

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

Acute inhalation toxicity : 4 h Acute toxicity estimate : > 5 mg/l

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

Skin corrosion/irritation : There is no data available for this product.

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 : troclosene sodium
LD50 rat: 1,500 mg/kg

adipic acid
LD50 rat: 5,560 mg/kg

Arylsulfonates
LD50 rat: 4,400 mg/kg
Sodium Fatty Acid Sarcosides
LD50 rat: > 5,000 mg/kg

Components

Acute inhalation toxicity: adipic acid
4 h LC50 rat: > 7.7 mg/l
Sodium Fatty Acid Sarcosides
4 h LC50 rat: 0.5 mg/l

Components

Acute dermal toxicity: troclosene sodium
LD50 rabbit: > 10,000 mg/kg
adipic acid
LD50 rabbit: > 7,940 mg/kg
Arylsulfonates
LD50 rabbit: > 2,000 mg/kg

Potential Health Effects

Eyes: Causes serious eye irritation.
Skin: Health injuries are not known or expected under normal use.
Ingestion: Health injuries are not known or expected under normal use.
Inhalation: May cause respiratory tract irritation. May cause nose, throat, and lung irritation.
Chronic Exposure: Health injuries are not known or expected under normal use.

Experience with human exposure

Eye contact: Redness, Pain, Irritation
Skin contact: No symptoms known or expected.
Ingestion: No symptoms known or expected.
Inhalation: Respiratory irritation, Cough

Section: 12. ECOLOGICAL INFORMATION

12.1 Ecotoxicity

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

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

Components

Toxicity to fish : Arylsulfonates
96 h LC50 Fish : > 100 mg/l

Components

Toxicity to daphnia and other aquatic invertebrates : Sodium Fatty Acid Sarcosides
48 h EC50 Daphnia: 29.7 mg/l

Components

Toxicity to algae : adipic acid
96 h EC50: 26.6 mg/l

12.2 Persistence and degradability
no data available

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.

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 : The product should not be allowed to enter drains, water courses or the soil. Where possible recycling is preferred to disposal or incineration. If recycling is not practicable, dispose of in compliance 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.

European Waste Catalogue : 200129* - detergents containing dangerous substances
Section: 14. TRANSPORT INFORMATION

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 : Not dangerous goods
14.2 UN proper shipping name : Not dangerous goods
14.3 Transport hazard class(es) : Not dangerous goods
14.4 Packing group : Not dangerous goods
14.5 Environmental hazards : Not dangerous goods
14.6 Special precautions for user : Not dangerous goods

Air transport (IATA)

14.1 UN number : Not dangerous goods
14.2 UN proper shipping name : Not dangerous goods
14.3 Transport hazard class(es) : Not dangerous goods
14.4 Packing group : Not dangerous goods
14.5 Environmental hazards : Not dangerous goods
14.6 Special precautions for user : Not dangerous goods

Sea transport (IMDG/IMO)

14.1 UN number : Not dangerous goods
14.2 UN proper shipping name : Not dangerous goods
14.3 Transport hazard class(es) : Not dangerous goods
14.4 Packing group : Not dangerous goods
14.5 Environmental hazards : Not dangerous goods
14.6 Special precautions for user : Not dangerous goods
14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code : Not dangerous goods

Section: 15. REGULATORY INFORMATION

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

according to Detergents Regulation EC 648/2004 : less than 5%: Phosphates, Anionic surfactants
Other constituents: Disinfectants

National Regulations

Take note of Dir 94/33/EC on the protection of young people at work.
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15.2 Chemical Safety Assessment
This product contains substances for which Chemical Safety Assessments are still required.

Section: 16. OTHER INFORMATION

Full text of R-Phrases
R02 Risk of explosion by shock, friction, fire or other sources of ignition.
R08 Contact with combustible material may cause fire.
R22 Harmful if swallowed.
R23 Toxic by inhalation.
R31 Contact with acids liberates toxic gas.
R36 Irritating to eyes.
R36/37 Irritating to eyes and respiratory system.
R50/53 Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Full text of H-Statements
H272 May intensify fire; oxidiser.
H302 Harmful if swallowed.
H315 Causes skin irritation.
H318 Causes serious eye damage.
H319 Causes serious eye irritation.
H330 Fatal if inhaled.
H335 May cause respiratory irritation.
H400 Very toxic to aquatic life.
H410 Very toxic to aquatic life with long lasting effects.

Full text of other abbreviations

Prepared by: Regulatory Affairs

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

DPD+ Substances:

The following substances are the lead substances that contribute to the mixture Exposure Scenario according to the DPD+ Rule:
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<table>
<thead>
<tr>
<th>Route</th>
<th>Substance</th>
<th>CAS-No.</th>
<th>EINECS-No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ingestion</td>
<td>troclosene sodium</td>
<td>2893-78-9</td>
<td>220-767-7</td>
</tr>
<tr>
<td>Inhalation</td>
<td>troclosene sodium</td>
<td>2893-78-9</td>
<td>220-767-7</td>
</tr>
<tr>
<td>Dermal</td>
<td>No lead substance</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Eyes</td>
<td>troclosene sodium</td>
<td>2893-78-9</td>
<td>220-767-7</td>
</tr>
<tr>
<td>aquatic environment</td>
<td>troclosene sodium</td>
<td>2893-78-9</td>
<td>220-767-7</td>
</tr>
</tbody>
</table>

To calculate if your downstream Operating Conditions and Risk management Measures are safe, please calculate your risk factor at the website below:

www.ecetoc.org/tra

Short title of Exposure Scenario: Surface disinfectant. Manual process

Use descriptors

Main User Groups: Professional uses: Public domain (administration, education, entertainment, services, craftsmen)

Sectors of end-use: SU22: Professional uses: Public domain (administration, education, entertainment, services, craftsmen)

Process categories: PROC10: Roller application or brushing

PROC8a: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities

Product categories: PC35: Washing and cleaning products (including solvent based products)

Environmental Release Categories: ERC8a: Wide dispersive indoor use of processing aids in open systems