

SAFETY DATA SHEET

City Clean O

Conforms to Regulation (EC) No. 1907/2006 (REACH), Annex II, as amended by Commission Regulation (EU) 2015/830 - United Kingdom (UK)

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

1.1 Product identifier

Product name : City Clean O
Product description : Cleaning Products
Recommended use : Industrial/Professional use

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

This product should not be used for applications other than those recommended in Section 1 without first seeking the advice of the supplier.

1.3 Details of the supplier of the safety data sheet



Hilco Chemie B.V.
Industrieweg 7
NL-6673 DE Andelst
Postbus 105
NL-6674 ZJ Herveld
Tel: +31 (0)488-473333
Fax: +31 (0)488-473335
www.hako.nl

e-mail address of person responsible for this SDS : sales@hilcochemie.com

1.4 Emergency telephone number

National advisory body/Poison Center
Telephone number : +44 0844 892 0111

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Product definition : Mixture

Classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]

Skin Corr. 1, H314

Ingredients of unknown toxicity : Percentage of the mixture consisting of ingredient(s) of unknown toxicity: 1%

Ingredients of unknown ecotoxicity : Percentage of the mixture consisting of ingredient(s) of unknown hazards to the aquatic environment: 1%

See Section 16 for the full text of the H statements declared above.

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

2.2 Label elements

Hazard pictograms :



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SECTION 2: Hazards identification

| | |
|--|---|
| Signal word | : Danger |
| Hazard statements | : Causes severe skin burns and eye damage. |
| <u>Precautionary statements</u> | |
| Prevention | : Wear protective gloves. Wear eye or face protection. Wear protective clothing. |
| Response | : IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER or physician. IF SWALLOWED: Immediately call a POISON CENTER or physician. Do NOT induce vomiting. IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower. Immediately call a POISON CENTER or physician. IF IN EYES: Immediately call a POISON CENTER or physician. |
| Storage | : Store locked up. |
| Disposal | : Dispose of contents and container in accordance with all local, regional, national and international regulations. |
| Hazardous ingredients | : Isotridecanol, ethoxylated 2-aminoethanol sodium hydroxide |
| Supplemental label elements | : Not applicable. |
| <u>Special packaging requirements</u> | |
| Containers to be fitted with child-resistant fastenings | : Not applicable. |
| Tactile warning of danger | : Not applicable. |

2.3 Other hazards

Other hazards which do not result in classification : None known.

SECTION 3: Composition/information on ingredients

3.2 Mixtures : Mixture

| Product/ingredient name | Identifiers | w/w % | Classification | |
|----------------------------|---|-------|---|---------|
| | | | Regulation (EC) No. 1272/2008 [CLP] | Type |
| 2-butoxyethanol | REACH #: 01-2119475108-36 EC: 203-905-0 CAS: 111-76-2 Index: 603-014-00-0 | ≤5 | Acute Tox. 4, H302 Acute Tox. 4, H312 Acute Tox. 4, H332 Skin Irrit. 2, H315 Eye Irrit. 2, H319 | [1] [2] |
| Isotridecanol, ethoxylated | REACH #: 01-2119976362-32 EC: 500-241-6 CAS: 69011-36-5 | ≤3 | Eye Dam. 1, H318 Aquatic Chronic 3, H412 | [1] |
| 2-aminoethanol | REACH #: 01-2119486455-28 EC: 205-483-3 CAS: 141-43-5 Index: 603-030-00-8 | ≤3 | Acute Tox. 4, H302 Acute Tox. 4, H312 Acute Tox. 4, H332 Skin Corr. 1B, H314 STOT SE 3, H335 Aquatic Chronic 3, H412 | [1] [2] |
| sodium p-cumenesulphonate | REACH #: 01-2119489411-37 EC: 239-854-6 CAS: 15763-76-5 | ≤3 | Eye Irrit. 2, H319 | [1] |
| sodium hydroxide | REACH #: 01-2119457892-27 EC: 215-185-5 CAS: 1310-73-2 Index: 011-002-00-6 | ≤1 | Met. Corr. 1, H290 Skin Corr. 1A, H314 | [1] [2] |
| | | | See Section 16 for the full text of the H statements declared above. | |

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SECTION 3: Composition/information on ingredients

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment, are PBTs, vPvBs or Substances of equivalent concern, or have been assigned a workplace exposure limit and hence require reporting in this section.

Type

- [1] Substance classified with a health or environmental hazard
- [2] Substance with a workplace exposure limit
- [3] Substance meets the criteria for PBT according to Regulation (EC) No. 1907/2006, Annex XIII
- [4] Substance meets the criteria for vPvB according to Regulation (EC) No. 1907/2006, Annex XIII
- [5] Substance of equivalent concern

Occupational exposure limits, if available, are listed in Section 8.

SECTION 4: First aid measures

4.1 Description of first aid measures

- Eye contact** : Get medical attention immediately. Call a poison center or physician. Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Chemical burns must be treated promptly by a physician.
- Inhalation** : Get medical attention immediately. Call a poison center or physician. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband. In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.
- Skin contact** : Get medical attention immediately. Call a poison center or physician. Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Wash contaminated clothing thoroughly with water before removing it, or wear gloves. Continue to rinse for at least 10 minutes. Chemical burns must be treated promptly by a physician. Wash clothing before reuse. Clean shoes thoroughly before reuse.
- Ingestion** : Get medical attention immediately. Call a poison center or physician. Wash out mouth with water. Remove dentures if any. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Chemical burns must be treated promptly by a physician. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.
- Protection of first-aiders** : No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.

4.2 Most important symptoms and effects, both acute and delayed

Potential acute health effects

- Eye contact** : Causes serious eye damage.
- Inhalation** : No known significant effects or critical hazards.
- Skin contact** : Causes severe burns.
- Ingestion** : No known significant effects or critical hazards.

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SECTION 4: First aid measures

Over-exposure signs/symptoms

- Eye contact** : Adverse symptoms may include the following:
pain
watering
redness
- Inhalation** : No specific data.
- Skin contact** : Adverse symptoms may include the following:
pain or irritation
redness
blistering may occur
- Ingestion** : Adverse symptoms may include the following:
stomach pains

4.3 Indication of any immediate medical attention and special treatment needed

- Notes to physician** : In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.
- Specific treatments** : No specific treatment.

SECTION 5: Firefighting measures

5.1 Extinguishing media

- Suitable extinguishing media** : Use an extinguishing agent suitable for the surrounding fire.
- Unsuitable extinguishing media** : None known.

5.2 Special hazards arising from the substance or mixture

- Hazards from the substance or mixture** : In a fire or if heated, a pressure increase will occur and the container may burst.
- Hazardous combustion products** : Decomposition products may include the following materials:
carbon dioxide
carbon monoxide
nitrogen oxides
sulfur oxides
metal oxide/oxides

5.3 Advice for firefighters

- Special precautions for fire-fighters** : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.
- Special protective equipment for fire-fighters** : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. Clothing for fire-fighters (including helmets, protective boots and gloves) conforming to European standard EN 469 will provide a basic level of protection for chemical incidents.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

- For non-emergency personnel** : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Do not breathe vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.
- For emergency responders** : If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

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SECTION 6: Accidental release measures

6.2 Environmental precautions : Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

6.3 Methods and materials for containment and cleaning up

Small spill : Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

Large spill : Stop leak if without risk. Move containers from spill area. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations. Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product.

6.4 Reference to other sections : See Section 1 for emergency contact information.
See Section 8 for information on appropriate personal protective equipment.
See Section 13 for additional waste treatment information.

SECTION 7: Handling and storage

The information in this section contains generic advice and guidance. The list of Identified Uses in Section 1 should be consulted for any available use-specific information provided in the Exposure Scenario(s).

7.1 Precautions for safe handling

Protective measures : Put on appropriate personal protective equipment (see Section 8). Do not get in eyes or on skin or clothing. Do not breathe vapor or mist. Do not ingest. If during normal use the material presents a respiratory hazard, use only with adequate ventilation or wear appropriate respirator. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Keep away from acids. Empty containers retain product residue and can be hazardous. Do not reuse container.

Advice on general occupational hygiene : Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

7.2 Conditions for safe storage, including any incompatibilities

Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Store locked up. Separate from acids. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination.

7.3 Specific end use(s)

Recommendations : Industrial/Professional use

Industrial sector specific solutions : This product should not be used for applications other than those recommended in Section 1 without first seeking the advice of the supplier.

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SECTION 8: Exposure controls/personal protection

The information in this section contains generic advice and guidance. Information is provided based on typical anticipated uses of the product. Additional measures might be required for bulk handling or other uses that could significantly increase worker exposure or environmental releases.

8.1 Control parameters

Occupational exposure limits

| Product/ingredient name | Exposure limit values |
|---|--|
| United Kingdom (UK) 2-butoxyethanol 2-aminoethanol sodium hydroxide | EH40/2005 WELs (United Kingdom (UK), 12/2011). Absorbed through skin. STEL: 50 ppm 15 minutes. TWA: 25 ppm 8 hours. EH40/2005 WELs (United Kingdom (UK), 12/2011). Absorbed through skin. STEL: 7.6 mg/m ³ 15 minutes. STEL: 3 ppm 15 minutes. TWA: 1 ppm 8 hours. TWA: 2.5 mg/m ³ 8 hours. EH40/2005 WELs (United Kingdom (UK), 12/2011). STEL: 2 mg/m ³ 15 minutes. |

Recommended monitoring procedures : If this product contains ingredients with exposure limits, personal, workplace atmosphere 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. Reference should be made to monitoring standards, such as the following: European Standard EN 689 (Workplace atmospheres - Guidance for the assessment of exposure by inhalation to chemical agents for comparison with limit values and measurement strategy) European Standard EN 14042 (Workplace atmospheres - Guide for the application and use of procedures for the assessment of exposure to chemical and biological agents) European Standard EN 482 (Workplace atmospheres - General requirements for the performance of procedures for the measurement of chemical agents) Reference to national guidance documents for methods for the determination of hazardous substances will also be required.

DNELs/DMELs

| Product/ingredient name | Type | Exposure | Value | Population | Effects |
|-------------------------|------|-----------------------|-----------------------|------------|----------|
| 2-butoxyethanol | DNEL | Short term Inhalation | 246 mg/m ³ | Workers | Local |
| | DNEL | Short term Inhalation | 633 mg/m ³ | Workers | Systemic |
| | DNEL | Short term Dermal | 89 mg/kg | Workers | Systemic |
| | DNEL | Long term Dermal | 75 mg/kg bw/day | Workers | Systemic |
| | DNEL | Long term Inhalation | 98 mg/m ³ | Workers | Systemic |
| | DNEL | Short term Inhalation | 231 mg/m ³ | Consumers | Local |
| | DNEL | Short term Inhalation | 426 mg/m ³ | Consumers | Systemic |
| | DNEL | Long term Inhalation | 49 mg/m ³ | Consumers | Systemic |
| | DNEL | Long term Dermal | 38 mg/kg bw/day | Consumers | Systemic |
| | DNEL | Short term Dermal | 44.5 mg/kg bw/day | Consumers | Systemic |
| | DNEL | Long term Oral | 3.2 mg/kg bw/day | Consumers | Systemic |
| | DNEL | Short term Oral | 13.4 mg/kg bw/day | Consumers | Systemic |

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SECTION 8: Exposure controls/personal protection

| | | | | | |
|---------------------------|------|-----------------------|------------------------|-----------|----------|
| 2-aminoethanol | DNEL | Long term Inhalation | 98 mg/m ³ | Workers | Systemic |
| | DNEL | Short term Inhalation | 633 mg/m ³ | Consumers | Systemic |
| | DNEL | Long term Dermal | 1 mg/kg | Workers | Systemic |
| | DNEL | Long term Inhalation | 3.3 mg/m ³ | Workers | Local |
| sodium p-cumenesulphonate | DNEL | Long term Dermal | 0.24 mg/kg | Consumers | Systemic |
| | DNEL | Oral | 3.75 mg/kg | Consumers | Systemic |
| | DNEL | Long term Inhalation | 2 mg/m ³ | Consumers | Local |
| | DNEL | Long term Dermal | 7.6 mg/kg | Workers | Systemic |
| sodium hydroxide | DNEL | Long term Inhalation | 53.6 mg/m ³ | Workers | Systemic |
| | DNEL | Long term Dermal | 3.8 mg/kg | Consumers | Systemic |
| | DNEL | Long term Inhalation | 13.2 mg/m ³ | Consumers | Systemic |
| | DNEL | Long term Oral | 3.8 mg/kg bw/day | Consumers | Systemic |
| | DNEL | Long term Inhalation | 1 mg/m ³ | Consumers | Local |
| | DNEL | Long term Inhalation | 1 mg/m ³ | Workers | Local |
| | DNEL | Short term Inhalation | 1 mg/m ³ | Consumers | Local |
| | DNEL | Short term Inhalation | 1 mg/m ³ | Workers | Local |

PNECs

| Product/ingredient name | Compartment Detail | Value | Method Detail |
|---------------------------|------------------------|------------------|---------------|
| 2-butoxyethanol | Fresh water sediment | 8.14 mg/kg | - |
| | Soil | 2.8 mg/kg | - |
| | Sewage Treatment Plant | 463 mg/l | - |
| 2-aminoethanol | Marine water sediment | 3.46 mg/kg | - |
| | Fresh water | 8.8 mg/l | - |
| | Fresh water | 0.085 mg/l | - |
| | Marine water | 0.0085 mg/l | - |
| | Sewage Treatment Plant | 100 mg/l | - |
| | Fresh water sediment | 0.425 mg/kg dwt | - |
| sodium p-cumenesulphonate | Marine water sediment | 0.0425 mg/kg wwt | - |
| | Soil | 0.035 mg/kg dwt | - |
| | Fresh water | 0.23 mg/l | - |
| | Sewage Treatment Plant | 100 mg/l | - |

8.2 Exposure controls

Appropriate engineering controls : If user operations generate dust, fumes, gas, vapor or mist, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits.

Individual protection measures

Hygiene measures : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

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SECTION 8: Exposure controls/personal protection

- Eye/face protection** : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: chemical splash goggles and/or face shield. If inhalation hazards exist, a full-face respirator may be required instead. Recommended: chemical splash goggles and/or face shield.
- Skin protection**
- Hand protection** : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated. > 8 hours (breakthrough time): Nitrilrubber >0.35 mm thickness.
- Body protection** : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product. Recommended: chemical-resistant protective suit
- Other skin protection** : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
- Respiratory protection** : Based on the hazard and potential for exposure, select a respirator that meets the appropriate standard or certification. Respirators must be used according to a respiratory protection program to ensure proper fitting, training, and other important aspects of use.
- Environmental exposure controls** : 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

- Physical state** : Liquid.
- Color** : Not available.
- Odor** : Not available.
- pH, ca.** : 13.5
- Melting point/freezing point** : Not available.
- Initial boiling point and boiling range** : Not available.
- Flash point** : Not available.
- Evaporation rate** : Not available.
- Flammability (solid, gas)** : Not available.
- Upper/lower flammability or explosive limits** : Not available.
- Vapor pressure** : Not available.
- Vapor density** : Not available.
- Relative density** : 1
- Solubility(ies)** : Not available.
- Partition coefficient: n-octanol/ water** : Not available.
- Auto-ignition temperature** : Not available.
- Decomposition temperature** : Not available.
- Viscosity** : Not available.

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SECTION 9: Physical and chemical properties

Explosive properties : Not available.

Oxidizing properties : Not available.

9.2 Other information

VOC Contents

| Regulation | Product as-supplied |
|--------------------------|-------------------------|
| Without volume exclusion | 31.1 g/l 3.1 % (w/w) |

No additional information.

SECTION 10: Stability and reactivity

10.1 Reactivity : No specific test data related to reactivity available for this product or its ingredients.

10.2 Chemical stability : The product is stable.

10.3 Possibility of hazardous reactions : Under normal conditions of storage and use, hazardous reactions will not occur.

10.4 Conditions to avoid : No specific data.

10.5 Incompatible materials : Reactive or incompatible with the following materials:
acids

10.6 Hazardous decomposition products : Under normal conditions of storage and use, hazardous decomposition products should not be produced.

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity

| Product/ingredient name | Result | Species | Dose | Exposure |
|---|-------------|---------|-------------------|----------|
| 2-butoxyethanol Isotridecanol, ethoxylated | LD50 Oral | Rat | 917 mg/kg | - |
| | LD50 Oral | Rat | 500 to 2000 mg/kg | - |
| 2-aminoethanol sodium p-cumenesulphonate | LD50 Oral | Rat | 1720 mg/kg | - |
| | LD50 Dermal | Rabbit | 2001 mg/kg | - |
| | LD50 Oral | Rat | 2001 mg/kg | - |

Conclusion/Summary : Not available.

Acute toxicity estimates

| Route | ATE value |
|---------------------|---------------|
| Oral | 24184.3 mg/kg |
| Dermal | 24526.2 mg/kg |
| Inhalation (vapors) | 245.3 mg/l |

Irritation/Corrosion

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SECTION 11: Toxicological information

| Product/ingredient name | Result | Species | Score | Exposure | Observation |
|--|--------------------------|---------|-------|--------------------------|-------------|
| 2-butoxyethanol | Eyes - Moderate irritant | Rabbit | - | 24 hours 100 milligrams | - |
| | Eyes - Severe irritant | Rabbit | - | 100 milligrams | - |
| | Skin - Mild irritant | Rabbit | - | 500 milligrams | - |
| Isotridecanol, ethoxylated 2-aminoethanol | Eyes - Severe irritant | Rabbit | - | - | - |
| | Eyes - Severe irritant | Rabbit | - | 250 Micrograms | - |
| | Skin - Moderate irritant | Rabbit | - | 505 milligrams | - |
| sodium hydroxide | Eyes - Severe irritant | Monkey | - | 24 hours 1 Percent | - |
| | Eyes - Mild irritant | Rabbit | - | 400 Micrograms | - |
| | Eyes - Severe irritant | Rabbit | - | 24 hours 50 Micrograms | - |
| | Eyes - Severe irritant | Rabbit | - | 1 Percent | - |
| | Eyes - Severe irritant | Rabbit | - | 0.5 minutes 1 milligrams | - |
| | Skin - Mild irritant | Human | - | 24 hours 2 Percent | - |
| | Skin - Severe irritant | Rabbit | - | 24 hours 500 milligrams | - |

Conclusion/Summary : Not available.

Sensitizer

Conclusion/Summary : Not available.

Mutagenicity

Conclusion/Summary : Not available.

Carcinogenicity

Conclusion/Summary : Not available.

Reproductive toxicity

Conclusion/Summary : Not available.

Teratogenicity

Conclusion/Summary : Not available.

Specific target organ toxicity (single exposure)

| Product/ingredient name | Category | Route of exposure | Target organs |
|-------------------------|------------|-------------------|------------------------------|
| 2-aminoethanol | Category 3 | Not applicable. | Respiratory tract irritation |

Specific target organ toxicity (repeated exposure)

Not available.

Aspiration hazard

Not available.

Information on the likely routes of exposure : Not available.

Potential acute health effects

Inhalation : No known significant effects or critical hazards.

Ingestion : No known significant effects or critical hazards.

Skin contact : Causes severe burns.

Eye contact : Causes serious eye damage.

Symptoms related to the physical, chemical and toxicological characteristics

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SECTION 11: Toxicological information

| | |
|---------------------|--|
| Inhalation | : No specific data. |
| Ingestion | : Adverse symptoms may include the following: stomach pains |
| Skin contact | : Adverse symptoms may include the following: pain or irritation redness blistering may occur |
| Eye contact | : Adverse symptoms may include the following: pain watering redness |

Potential chronic health effects

Not available.

| | |
|------------------------------|---|
| Conclusion/Summary | : Not available. |
| General | : No known significant effects or critical hazards. |
| Carcinogenicity | : No known significant effects or critical hazards. |
| Mutagenicity | : No known significant effects or critical hazards. |
| Teratogenicity | : No known significant effects or critical hazards. |
| Developmental effects | : No known significant effects or critical hazards. |
| Fertility effects | : No known significant effects or critical hazards. |
| Other information | : Not available. |

SECTION 12: Ecological information

12.1 Toxicity

| Product/ingredient name | Result | Species | Exposure |
|---------------------------|--------------------------------------|---------------------------------------|----------|
| 2-butoxyethanol | Acute EC50 >1000 mg/l Fresh water | Daphnia - Daphnia magna | 48 hours |
| | Acute LC50 800000 µg/l Marine water | Crustaceans - Crangon crangon | 48 hours |
| 2-aminoethanol | Acute LC50 1250000 µg/l Marine water | Fish - Menidia beryllina | 96 hours |
| | Acute EC50 14.04 mg/l Fresh water | Algae - Desmodesmus subspicatus | 72 hours |
| | Acute LC50 >100000 µg/l Marine water | Crustaceans - Crangon crangon - Adult | 48 hours |
| sodium p-cumenesulphonate | Acute LC50 170000 µg/l Fresh water | Fish - Carassius auratus | 96 hours |
| | EC50 100 mg/l | Algae | 96 hours |
| | EC50 100 mg/l | Daphnia | 48 hours |
| | LC50 100 mg/l | Fish | 96 hours |
| sodium hydroxide | Acute LC50 125 ppm Fresh water | Fish - Gambusia affinis - Adult | 96 hours |

Conclusion/Summary : Not available.

12.2 Persistence and degradability

| Product/ingredient name | Test | Result | Dose | Inoculum |
|---------------------------|----------|---------------------------|------|----------|
| sodium p-cumenesulphonate | OECD 301 | >60 % - Readily - 28 days | - | - |

Conclusion/Summary : Not available.

| Product/ingredient name | Aquatic half-life | Photolysis | Biodegradability |
|---------------------------|-------------------|------------|------------------|
| sodium p-cumenesulphonate | - | - | Readily |
| sodium hydroxide | - | - | Readily |

12.3 Bioaccumulative potential

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SECTION 12: Ecological information

| Product/ingredient name | LogP _{ow} | BCF | Potential |
|----------------------------|--------------------|-------|-----------|
| 2-butoxyethanol | 0.81 | - | low |
| Isotridecanol, ethoxylated | - | 232.5 | low |
| 2-aminoethanol | -1.31 | - | low |
| sodium p-cumenesulphonate | -1.1 | - | low |

12.4 Mobility in soil

Soil/water partition coefficient (K_{oc}) : Not available.

Mobility : Not available.

12.5 Results of PBT and vPvB assessment

PBT : Not applicable.

vPvB : Not applicable.

12.6 Other adverse effects : No known significant effects or critical hazards.

SECTION 13: Disposal considerations

The information in this section contains generic advice and guidance. The list of Identified Uses in Section 1 should be consulted for any available use-specific information provided in the Exposure Scenario(s).

13.1 Waste treatment methods

Product

Methods of disposal : The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction.





Hazardous waste : The classification of the product may meet the criteria for a hazardous waste.

Packaging

Methods of disposal : The generation of waste should be avoided or minimized wherever possible. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible.

Special precautions : This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

SECTION 14: Transport information

| | ADR/RID | ADN | IMDG | IATA |
|--|--|--|---|--|
| 14.1 UN number | UN1719 | UN1719 | UN1719 | UN1719 |
| 14.2 UN proper shipping name | CAUSTIC ALKALI LIQUID, N.O.S. (2-aminoethanol, sodium hydroxide) | CAUSTIC ALKALI LIQUID, N.O.S. (2-aminoethanol, sodium hydroxide) | CAUSTIC ALKALI LIQUID, N.O.S. (2-aminoethanol, sodium hydroxide) | Caustic alkali liquid, n. o.s. (2-aminoethanol, sodium hydroxide) |
| 14.3 Transport hazard class(es) | 8  | 8  | 8  | 8  |

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SECTION 14: Transport information

| | | | | |
|----------------------------|---|---|--|---|
| 14.4 Packing group | III | III | III | III |
| 14.5 Environmental hazards | No. | No. | No. | No. |
| Additional information | <p><u>Hazard identification number</u> 80</p> <p><u>Limited quantity</u> 5 L</p> <p><u>Special provisions</u> 274</p> <p><u>Tunnel code</u> (E)</p> | <p><u>Special provisions</u> 274</p> | <p><u>Emergency schedules (EmS)</u> F-A, S-B</p> <p><u>Special provisions</u> 223, 274</p> | <p><u>Passenger and Cargo Aircraft</u> Quantity limitation: 5 L Packaging instructions: 852</p> <p><u>Cargo Aircraft Only</u> Quantity limitation: 60 L Packaging instructions: 856</p> <p><u>Limited Quantities - Passenger Aircraft</u> Quantity limitation: 1 L Packaging instructions: Y841</p> <p><u>Special provisions</u> A3, A803</p> |

14.6 Special precautions for user : **Transport within user's premises:** always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

SECTION 15: Regulatory information

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

EU Regulation (EC) No. 1907/2006 (REACH)

Annex XIV - List of substances subject to authorization

Annex XIV

None of the components are listed.

Substances of very high concern

None of the components are listed.

Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles : Not applicable.

Other EU regulations

Annex VIIA - Labelling for Contents

Annex VIIA - Labelling for Contents : less than 5%: non-ionic surfactants, amphoteric surfactants, perfumes, (R)-p-mentha-1,8-diene.

National regulations

United Kingdom (UK)

Biocidal Products Directive : Not applicable.

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SECTION 15: Regulatory information

Remark : Not available.
15.2 Chemical Safety Assessment : Not yet complete.

SECTION 16: Other information

Indicates information that has changed from previously issued version.

Abbreviations and acronyms : ATE = Acute Toxicity Estimate
 CLP = Classification, Labelling and Packaging Regulation [Regulation (EC) No. 1272/2008]
 DNEL = Derived No Effect Level
 EUH statement = CLP-specific Hazard statement
 PNEC = Predicted No Effect Concentration
 RRN = REACH Registration Number

Procedure used to derive the classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]

| Classification | Justification |
|--------------------|-----------------------|
| Skin Corr. 1, H314 | On basis of test data |

Full text of abbreviated H statements : H290 May be corrosive to metals.
 H302 Harmful if swallowed.
 H312 Harmful in contact with skin.
 H314 Causes severe skin burns and eye damage.
 H315 Causes skin irritation.
 H318 Causes serious eye damage.
 H319 Causes serious eye irritation.
 H332 Harmful if inhaled.
 H335 May cause respiratory irritation.
 H412 Harmful to aquatic life with long lasting effects.

Full text of classifications [CLP/GHS] : Acute Tox. 4, H302 ACUTE TOXICITY (oral) - Category 4
 Acute Tox. 4, H312 ACUTE TOXICITY (dermal) - Category 4
 Acute Tox. 4, H332 ACUTE TOXICITY (inhalation) - Category 4
 Aquatic Chronic 3, H412 AQUATIC HAZARD (LONG-TERM) - Category 3
 Eye Dam. 1, H318 SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 1
 Eye Irrit. 2, H319 SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 2
 Met. Corr. 1, H290 CORROSIVE TO METALS - Category 1
 Skin Corr. 1, H314 SKIN CORROSION/IRRITATION - Category 1
 Skin Corr. 1A, H314 SKIN CORROSION/IRRITATION - Category 1A
 Skin Corr. 1B, H314 SKIN CORROSION/IRRITATION - Category 1B
 Skin Irrit. 2, H315 SKIN CORROSION/IRRITATION - Category 2
 STOT SE 3, H335 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3

Product code : 00086
Date of printing : 1/30/2018
Date of issue/ Date of revision : 1/26/2018
Date of previous issue : 1/23/2018
Version : 2

Notice to reader

To the best of our knowledge, the information contained herein is accurate. However, neither the above-named supplier, nor any of its subsidiaries, assumes any liability whatsoever for the accuracy or completeness of the information contained herein.

Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.