

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

#### 1.1 Product identifier

| Product name                    | : | OVEN CLEANER POWER           |
|---------------------------------|---|------------------------------|
| Product code                    | : | 108458E                      |
| Use of the<br>Substance/Mixture | : | Grill Cleaner                |
| Substance type:                 | : | Mixture                      |
|                                 |   | For professional users only. |

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

| Identified uses                 | : | Process cleaner. Cleaning In place (CIP) 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.<br>PO Box 11; Winnington Avenue<br>Northwich, Cheshire, United Kingdom CW8 4DX<br>+ 44 (0)1606 74488<br>ccs@ecolab.com |
|-----------|--|
|-----------|--|

#### 1.4 Emergency telephone number

| Emergency telephone<br>number              | : | +441618841235<br>+32-(0)3-575-5555 Trans-European |
|--|---|---|
| Poison Information Centre telephone number | : | For medical professionals only: 0344 892 0111     |

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#### Section: 2. HAZARDS IDENTIFICATION

#### 2.1 Classification of the substance or mixture

#### Classification (REGULATION (EC) No 1272/2008)

| Corrosive to metals, Category 1 | H290 |
|---------------------------------|------|
| Skin corrosion, Sub-category 1A | H314 |
| Serious eye damage, Category 1  | H318 |

#### 2.2 Label elements

| Labelling (REGULATION (EC<br>Hazard pictograms | C) No 1272/2008)                    |   |
|--|-------------------------------------|---|
| Signal Word                                    | : Danger                            |   |
| Hazard Statements                              | : H290<br>H314                      | May be corrosive to metals.<br>Causes severe skin burns and eye damage.   |
| Precautionary Statements                       | : <b>Prevention:</b><br>P280        | Wear protective gloves/ eye protection/ face protection.  |
|  | <b>Response:</b><br>P303 + P361 + F | 2353 IF ON SKIN (or hair): Take off immediately<br>all contaminated clothing. Rinse skin with water<br>or shower. |
|  | P305 + P351 + F                     |   |
|  | P310                                | Immediately call a POISON CENTER/doctor.  |

Hazardous components which must be listed on the label: potassium hydroxide

#### 2.3 Other hazards

None known.

Section: 3. COMPOSITION/INFORMATION ON INGREDIENTS

#### 3.2 Mixtures

#### Hazardous components

| Chemical Name                             | CAS-No.<br>EC-No.<br>REACH No.             | Classification<br>REGULATION (EC) No 1272/2008  | Concentration<br>: [%] |
|---|--|---|------------------------|
| potassium hydroxide                       | 1310-58-3<br>215-181-3<br>01-2119487136-33 | Acute toxicity Category 4; H302<br>Skin corrosion Category 1A; H314<br>Corrosive to metals Category 1; H290<br>Skin corrosion/irritation Category 1A<br>5 - 100 %<br>Skin corrosion/irritation Category 1B<br>2 - < 5 %<br>Skin corrosion/irritation Category 2<br>0.5 - < 2 %<br>Serious eye damage/eye irritation<br>Category 1<br>2 - 100 %<br>Serious eye damage/eye irritation<br>Category 2A<br>0.5 - < 2 % | >= 5 - < 10            |
| Amines, C12-14<br>alkyldimethyl, N-oxides | 308062-28-4<br>01-2119490061-47            | Acute toxicity Category 4; H302<br>Skin irritation Category 2; H315<br>Serious eye damage Category 1; H318  | >= 0.25 - <<br>0.5     |

| OVEN CLEANER POWER                           |  |   |              |  |  |
|--|--|---|--------------|--|--|
|  |  | Acute aquatic toxicity Category 1; H400<br>Chronic aquatic toxicity Category 2; H411<br>M = 1 |              |  |  |
| Substances with a workplace exposure limit : |  |   |              |  |  |
| Propylene glycol                             | 57-55-6<br>200-338-0<br>01-2119456809-23   | Not Classified;   | >= 2.5 - < 5 |  |  |
| For the full text of the H-S                 | 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<br>at least 15 minutes. Remove contact lenses, if present and easy<br>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.<br>Wash clothing before reuse. Thoroughly clean shoes before<br>reuse. Get medical attention immediately.                          |
| 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.  |

#### 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<br>firefighting | : | Not flammable or combustible.   |
|---|---|---|
| Hazardous combustion<br>products        | : | Depending on combustion properties, decomposition products<br>may include following materials:<br>Carbon oxides |

#### 5.3 Advice for firefighters

Special protective equipment : Use personal protective equipment.

for firefighters

Further information : 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 :<br>personnel | Ensure adequate ventilation. Keep people away from and upwind<br>of spill/leak. Avoid inhalation, ingestion and contact with skin and<br>eyes. When workers are facing concentrations above the<br>exposure limit they must use appropriate certified respirators.<br>Ensure clean-up is conducted by trained personnel only. Refer to<br>protective measures listed in sections 7 and 8. |
|---|---|
| Advice for emergency :<br>responders    | If specialised clothing is required to deal with the spillage, take<br>note of any information in Section 8 on suitable and unsuitable<br>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 : 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.

#### 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 | Do not ingest. Do not get in eyes, on skin, or on clothing. I<br>with adequate ventilation. Wash hands thoroughly after ha<br>Do not breathe spray, vapour. In case of mechanical malfu<br>or if in contact with unknown dilution of product, wear full F<br>Protective Equipment (PPE).                    | ndling.<br>Inction, |
|-------------------------|---|---------------------|
| Hygiene measures        | Handle in accordance with good industrial hygiene and sa<br>practice. Remove and wash contaminated clothing before<br>Wash face, hands and any exposed skin thoroughly after<br>handling. Provide suitable facilities for quick drenching or f<br>of the eyes and body in case of contact or splash hazard. | re-use.             |

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

| Requirements for storage areas and containers | : | Absorb spillage to prevent material damage. Keep only in original packaging.   |
|---|---|--|
|   |   | Do not store near acids. Absorb spillage to prevent material<br>damage. Keep out of reach of children. Keep container tightly<br>closed. Keep only in original packaging. Store in suitable labeled<br>containers. |
| Storage temperature                           | : | 0 °C to 40 °C  |
| Packaging material                            | : | Suitable material: Plastic material  |
|   |   | Unsuitable material: Mild steel, Aluminium   |
| 7.3 Specific end uses                         |   |  |

| Specific use(s) | : | Process cleaner. Cleaning In place (0 | CIP) process |
|-----------------|---|---------------------------------------|--------------|
|-----------------|---|---------------------------------------|--------------|

#### Section: 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

#### 8.1 Control parameters

#### **Occupational Exposure Limits**

| Components          | CAS-No.   | Value type (Form<br>of exposure) | Control parameters | Basis    |
|---------------------|-----------|----------------------------------|--------------------|----------|
| potassium hydroxide | 1310-58-3 | STEL                             | 2 mg/m3            | UKCOSSTD |
| Propylene glycol    | 57-55-6   | TWA (particles)                  | 10 mg/m3           | UKCOSSTD |
|                     |           | TWA (Total vapour                | 150 ppm            | UKCOSSTD |
|                     |           | and particles)                   | 474 mg/m3          |          |

#### DNEL

| DNEL                |   |   |
|---------------------|---|---|
| potassium hydroxide | : | End Use: Workers<br>Exposure routes: Inhalation<br>Value: 1 mg/m3<br>End Use: Consumers<br>Exposure routes: Inhalation<br>Value: 1 mg/m3  |
| Propylene glycol    | : | End Use: Workers<br>Exposure routes: Inhalation<br>Potential health effects: Long-term systemic effects<br>Value: 168 mg/m3<br>End Use: Workers<br>Exposure routes: Inhalation<br>Potential health effects: Long-term local effects<br>Value: 10 mg/m3    |
|                     |   | End Use: Consumers<br>Exposure routes: Inhalation<br>Potential health effects: Long-term systemic effects<br>Value: 50 mg/m3<br>End Use: Consumers<br>Exposure routes: Inhalation<br>Potential health effects: Long-term local effects<br>Value: 10 mg/m3 |

| End Use: Consumers<br>Exposure routes: Dermal<br>Potential health effects: Long-term systemic effects<br>213 mg/kg        |
|---|
| End Use: Consumers<br>Exposure routes: Ingestion<br>Potential health effects: Long-term systemic effects<br>Value: 85 ppm |

PNFC

| PNEC             |   |   |
|------------------|---|---|
| Propylene glycol | : | Fresh water<br>Value: 260 mg/l              |
|                  |   | Marine water<br>Value: 26 mg/l              |
|                  |   | Intermittent use/release<br>Value: 183 mg/l |
|                  |   | Fresh water sediment<br>Value: 572 mg/kg    |
|                  |   | Marine sediment<br>Value: 57.2 mg/kg        |
|                  |   | Sewage treatment plant<br>Value: 20000 mg/l |
|                  |   | Soil<br>Value: 50 mg/kg                     |
|                  |   |   |

#### 8.2 Exposure controls

#### Appropriate engineering controls

| Engineering measures          | :  | Effective exhaust ventilation system. Maintain air concentrations below occupational exposure standards.   |
|-------------------------------|----|--|
| Individual protection measure | es |  |
| Hygiene measures              | :  | Handle in accordance with good industrial hygiene and safety<br>practice. Remove and wash contaminated clothing before re-use.<br>Wash face, hands and any exposed skin thoroughly after<br>handling. Provide suitable facilities for quick drenching or flushing<br>of the eyes and body in case of contact or splash hazard. |
| Eye/face protection (EN 166)  | :  | Safety goggles<br>Face-shield  |
| Hand protection (EN 374)      | :  | Recommended preventive skin protection<br>Gloves<br>Nitrile rubber<br>butyl-rubber   |

|  | Breakthrough time: 1 – 4 hours<br>Minimum thickness for butyl-rubber 0.7 mm for nitrile rubber 0.4<br>mm or equivalent (please refer to the gloves<br>manufacturer/distributor for advise).<br>Gloves should be discarded and replaced if there is any indication<br>of degradation or chemical breakthrough.   |
|--|---|
| Skin and body protection :<br>(EN 14605) | Personal protective equipment comprising: suitable protective gloves, safety goggles and protective clothing including appropriate safety shoes   |
| 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 experies centre            |   |

## 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

| Appearance                                 | : | liquid   |
|--|---|--|
| Colour                                     | : | yellow   |
| Odour                                      | : | odourless  |
| рН   | : | 12.9 - 13.9, 100 %                                   |
| 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<br>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 |
| 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                           | : | 1.115 - 1.14   |
| Water solubility                           | : | soluble  |
| Solubility in other solvents               | : | Not applicable and/or not determined for the mixture |
| Partition coefficient: n-<br>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

#### 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

Mild steel Aluminium

#### **10.6 Hazardous decomposition products**

Depending on combustion properties, decomposition products may include following materials: Carbon oxides

#### Section: 11. TOXICOLOGICAL INFORMATION

#### 11.1 Information on toxicological effects

| 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 produ | uct. |
| Acute dermal toxicity     | : There is no data available for this produ | uct. |
| Skin corrosion/irritation | : There is no data available for this produ | uct. |

| 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               | :  | potassium hydroxide LD50 rat: 333 mg/kg                                    |
|                                   |    | Amines, C12-14 alkyldimethyl, N-oxides LD50 rat: 1,064 mg/kg               |
|                                   |    | Propylene glycol LD50 rat: 22,000 mg/kg                                    |
| Components                        |    |  |
| Acute inhalation toxicity         | :  | Propylene glycol 4 h LC50 rabbit: 158.5 mg/l<br>Test atmosphere: dust/mist |
| Potential Health Effects          |    |  |
| Eyes                              | :  | Causes serious eye damage.   |
| Skin                              | :  | Causes severe skin burns.  |
| Ingestion                         | :  | Causes digestive tract burns.  |
| Inhalation                        | :  | May cause nose, throat, and lung irritation.                               |
| Chronic Exposure                  | :  | Health injuries are not known or expected under normal use.                |
| Experience with human expo        | รเ | ire  |
| Eye contact                       | :  | Redness, Pain, Corrosion   |
| Skin contact                      | :  | Redness, Pain, Corrosion   |
| Ingestion                         | :  | Corrosion, Abdominal pain  |
| Inhalation                        | :  | Respiratory irritation, Cough  |

### Section: 12. ECOLOGICAL INFORMATION

### 12.1 Toxicity

| Environmental Effects                               | : This product has no known ecotoxicological effects.   |
|---|---|
|   |   |
| 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                                    | : Amines, C12-14 alkyldimethyl, N-oxides96 h LC50: 2.67 mg/l  |
|   | Propylene glycol96 h LC50 Fish: > 10,000 mg/l   |
| Components  |   |
| Toxicity to daphnia and other aquatic invertebrates | : Amines, C12-14 alkyldimethyl, N-oxides48 h EC50 Daphnia magna (Water flea): 3.1 mg/l  |
|   | Propylene glycol48 h EC50 Aquatic Invertebrate: 18,340 mg/l   |
| Components  |   |
| Toxicity to algae                                   | : Amines, C12-14 alkyldimethyl, N-oxides72 h LC50: 0.143 mg/l<br>72 h NOEC: 0.067 mg/l  |
| 12.2 Persistence and degradabi                      | lity  |
| Product   |   |
| Biodegradability                                    | : The surfactants contained in the product are biodegradable according to the requirements of the detergent regulation 648/2004/EC  |
| Components  |   |
| Biodegradability                                    | : potassium hydroxideResult: Not applicable - inorganic   |
|   | Amines, C12-14 alkyldimethyl, N-oxidesResult: Readily biodegradable.  |
|   | Propylene glycolResult: Readily biodegradable.  |
| 12.3 Bioaccumulative potential                      |   |
| no data available                                   |   |
| 12.4 Mobility in soil                               |   |
| 12.4 Mobility in soil                               |   |
| no data available                                   |   |
| 12.5 Results of PBT and vPvB a                      | ssessment   |
| Product   |   |
| Assessment  | : This substance/mixture contains no components considered to be<br>either persistent, bioaccumulative and toxic (PBT), or very<br>persistent and very bioaccumulative (vPvB) at levels of 0.1% or<br>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                           | 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<br>to an approved waste handling site for recycling or disposal. Do<br>not re-use empty containers. Dispose of in accordance with local,<br>state, and federal regulations.   |  |
| Guidance for Waste Code selection | Inorganic wastes containing dangerous substances. If this product<br>is used in any further processes, the final user must redefine and<br>assign the most appropriate European Waste Catalogue Code. It<br>is the responsibility of the waste generator to determine the<br>toxicity and physical properties of the material generated to<br>determine the proper waste identification and disposal methods in<br>compliance with applicable European (EU Directive 2008/98/EC)<br>and local regulations. |  |

#### 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                     | : | 1814                         |
| 14.2 UN proper shipping<br>name    | : | POTASSIUM HYDROXIDE SOLUTION |
| 14.3 Transport hazard class(es)    | : | 8                            |
| 14.4 Packing group                 | : | II                           |
| 14.5 Environmental hazards         | : | No                           |
| 14.6 Special precautions for user  | : | None                         |
| Air transport (IATA)               |   |                              |
| 14.1 UN number                     | : | 1814                         |
| 14.2 UN proper shipping<br>name    | : | Potassium hydroxide solution |
| 14.3 Transport hazard<br>class(es) | : | 8                            |
| 14.4 Packing group                 | : | II                           |
| 14.5 Environmental hazards         | : | No                           |
| 14.6 Special precautions for user  | : | None                         |

#### Sea transport (IMDG/IMO)

| : 1814<br>: POTASSIUM HYDROXIDE SOLUTION |
|--|
| : POTASSIUM HYDROXIDE SOLUTION           |
| : 8                                      |
| : 11                                     |
| : No                                     |
| : None                                   |
| : Not applicable.                        |
|  |

#### Section: 15. REGULATORY INFORMATION

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

| according to Detergents<br>Regulation EC 648/2004   | :  | less than 5 %: Phosphates, Anionic surfactants, Non-ionic surfactants |
|---|----|---|
| Seveso III: Directive<br>2012/18/EU of the European<br>Parliament and of the Council<br>on the control of major-<br>accident hazards involving<br>dangerous substances. | :  | Not applicable.   |
| Candidate List of Substances<br>of Very High Concern for<br>Authorisation   | :  | Not applicable.   |
| National Regulations  |    |   |
| Take note of Dir 94/33/EC on  | th | e protection of young people at work.                                 |
| Other regulations   | :  | The Chemicals (Hazard Information and Packaging for Supp              |

| 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 | Section: 16. OTHER INFOR | MATION |
|--------------------------------|--------------------------|--------|
|--------------------------------|--------------------------|--------|

| Classification              | Justification      |
|-----------------------------|--------------------|
| Corrosive to metals 1, H290 | Calculation method |
| Skin corrosion 1A, H314     | Calculation method |
| Serious eye damage 1, H318  | 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.         |
| H315 | Causes skin irritation.                          |
| H318 | Causes serious eye damage.                       |
| H400 | Very toxic to aquatic life.                      |
| 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; AIIC - 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 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

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

#### Exposure Scenario: Process cleaner. Cleaning In place (CIP) process

| Life Cycle Stage | : | Use at industrial sites |  |  |
|------------------|---|-------------------------|--|--|
| Product category | : | PC35                    | Washing and cleaning products (including solvent based products) |  |

#### Contributing scenario controlling environmental exposure for:

| Environmental release<br>category | : | ERC4         | Industrial use of processing aids in processes and products, not becoming part of articles |
|-----------------------------------|---|--------------|--|
| Daily amount per site             | : | 50 kg        |  |
| Type of Sewage Treatment<br>Plant | : | Municipal se | ewage treatment plant  |

#### Contributing scenario controlling worker exposure for:

| Process category                                    | : | PROC8b      | Transfer of substance or preparation (charge<br>discharging) from/ to vessels/ large contained<br>dedicated facilities |   |
|---|---|-------------|--|---|
| Exposure duration                                   | : | 60 min      |  |   |
| Operational conditions and risk management measures | : | Indoor      |  |   |
|   |   | Local Exha  | ust Ventilation is not required  |   |
| General ventilation                                 |   | Ventilation | rate per hour  | 1 |
| Skin Protection                                     | : | see section | 8  |   |
| Respiratory Protection                              | : | see section | 8  |   |

#### Contributing scenario controlling worker exposure for:

| Process category                                    | : | PROC1                                     | Use in closed process, no likelihood of expo | sure |
|---|---|---|--|------|
| Exposure duration                                   | : | 480 min                                   |  |      |
| Operational conditions and risk management measures | : | Indoor                                    |  |      |
|   |   | Local Exhaust Ventilation is not required |  |      |
| General ventilation                                 |   | Ventilation                               | rate per hour                                | 1    |
| Skin Protection                                     | : | see section                               | 8  |      |
| Respiratory Protection                              | : | see section                               | 8  |      |