

PREgold ACTIVATOR**SECTION 1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING****1.1 Product identifier**

Product name : PREgold ACTIVATOR
Product code : 114518E
Use of the Substance/Mixture : Biocide
Type of substance : Mixture

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 : Animal care. Manual process
Animal housing care. Semi-Automatic 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 version : 01.07.2014
: 1.0

SECTION 2. HAZARDS IDENTIFICATION**2.1 Classification of the substance or mixture****Classification (REGULATION (EC) No 1272/2008)**

Not a hazardous substance or mixture.

Classification (67/548/EEC, 1999/45/EC)

The product does not need to be labelled in accordance with EC directives or respective national

PREgold ACTIVATOR

laws.

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)

Not a hazardous substance or mixture.

Additional Labelling:

Special labelling of certain mixtures : Safety data sheet available for professional user on request.

2.3 Other hazards

Do not mix with bleach or other chlorinated products – will cause chlorine gas.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

3.2 Mixtures

Hazardous components

| Chemical Name | CAS-No. EC-No. REACH No. | Classification (67/548/EEC) | Classification (REGULATION (EC) No 1272/2008) | Concentration: [%] |
|-----------------|--|--------------------------------|--|-----------------------|
| Lactic acid | 79-33-4 201-196-2 01-2119474164-39 | Xi; R38-R41 | Skin irritationCategory 2; H315 Serious eye damage/eye irritationCategory 1; H318 | >= 1 - < 2.5 |
| WEL Substance : | | | | |
| glycerin | 56-81-5 200-289-5 | Not Classified | Not a hazardous substance or mixture according to Regulation (EC) No. 1272/2008. | >= 5 - < 10 |

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 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

PREgold ACTIVATOR

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

4.3 Indication of immediate medical attention and special treatment needed

Treatment : No specific measures identified.

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 : Not flammable or combustible.

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

5.3 Advice for firefighters

Special protective equipment for firefighters : Use personal protective equipment.

Further information : Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.

SECTION 6. ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

Advice for non-emergency personnel : 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 : No special environmental precautions required.

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

PREgold ACTIVATOR

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 : Wash hands after handling. For personal protection see section 8. Do not mix with bleach or other chlorinated products – will cause chlorine gas.

Hygiene measures : Wash hands before breaks and immediately after handling the product.

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 40 °C

7.3 Specific end use(s)

Specific use(s) : Animal care. Manual process
 Animal housing care. Semi-Automatic process

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters

Occupational Exposure Limits

| CAS-No. | Components | Value type (Form of exposure) | Control parameters | Update | Basis |
|---------|------------|-------------------------------|--------------------|------------|----------|
| 56-81-5 | glycerin | TWA (Mist) | 10 mg/m3 | 2011-12-01 | UKCOSSTD |

8.2 Exposure controls

Appropriate engineering controls

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

Individual protection measures

Hygiene measures : Wash hands before breaks and immediately after handling the product.

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

PREgold ACTIVATOR

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, 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

Appearance : liquid
Colour : dark yellow
Odour : odourless
pH : 2.35 - 3.35, 100 %
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 : 1.02 - 1.06
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

PREgold ACTIVATOR

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

Do not mix with bleach or other chlorinated products – will cause chlorine gas.

10.4 Conditions to avoid

None known.

10.5 Incompatible materials

None known.

10.6 Hazardous decomposition products

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

SECTION 11. TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

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

Toxicity

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

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 : 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.

PREgold ACTIVATOR

- 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 : Lactic acid
LD50 rat: 3,543 mg/kg
- glycerin
LD50 rat: 18,300 mg/kg
- Acute inhalation toxicity : Lactic acid
4 h LC50 rat: > 7.94 mg/l
- Acute dermal toxicity : Lactic acid
LD50 rabbit: > 2,000 mg/kg
- glycerin
LD50 rabbit: 23,000 mg/kg

Potential Health Effects

- 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

- 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 Ecotoxicity

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

Product

- Toxicity to fish : no data available

PREgold ACTIVATOR

Toxicity to daphnia and other aquatic invertebrates : no data available

Toxicity to algae : no data available

Components

Toxicity to fish : Lactic acid
96 h LC50 Fish : 130 mg/l

glycerin
96 h LC50 Fish : 855 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

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 : 200114* - acids

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

PREgold ACTIVATOR

- 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

National Regulations

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

This product contains substances for which Chemical Safety Assessments are still required.

SECTION 16. OTHER INFORMATION

Full text of R-Phrases

PREgold ACTIVATOR

Not Classified
R38
R41

Not Classified
Irritating to skin.
Risk of serious damage to eyes.

Full text of H-Statements

H315 Causes skin irritation.
H318 Causes serious eye damage.

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:

| Route | Substance | CAS-No. | EINECS-No. |
|---------------------|-------------------|---------|------------|
| Ingestion | No lead substance | | |
| Inhalation | No lead substance | | |
| Dermal | Lactic acid | 79-33-4 | 201-196-2 |
| Eyes | Lactic acid | 79-33-4 | 201-196-2 |
| aquatic environment | No lead substance | | |

Physical properties DPD+ Substances:

| Substance | Vapour pressure | Water solubility | POW | Molar Mass |
|-------------|-----------------|------------------|------|------------|
| Lactic acid | 0.0041 hPa | | 0.25 | |

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

PREgold ACTIVATOR

Short title of Exposure Scenario : **Animal housing care. Semi-Automatic process**

Use descriptors

Main User Groups : Industrial uses: Uses of substances as such or in preparations at industrial sites

Sectors of end-use : **SU3:** Industrial uses: Uses of substances as such or in preparations at industrial sites

Process categories : **PROC7:** Industrial spraying
PROC8b: Transfer of substance or preparation (charging/ discharging) from/ to vessels/ large containers at dedicated facilities

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

Environmental Release Categories : **ERC4:** Industrial use of processing aids in processes and products, not becoming part of articles

Short title of Exposure Scenario : **Animal care. 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

SAFETY DATA SHEET



Conforms to Regulation (EC) No. 1907/2006 (REACH), Annex II (453/2010) - Europe

PREgold BASE

Version : 1.11

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

1.1 Product identifier

Product name : PREgold BASE
Product code : 114523E
Product use : Biocide
Product is for professional use only

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

| Identified uses |
|-----------------|
| Animal hygiene |

| Uses advised against |
|----------------------|
| None known. |

1.3 Details of the supplier of the safety data sheet

Manufacturer/ Distributor/ Importer : Ecolab Ltd.
David Murray John Building
UK-SN1 1NH Swindon, Wiltshire
England
Tel +44 (0)1793 511221
Fax +44 (0)1793 618552
CCS@ecolab.com

1.4 Emergency telephone number

National advisory body/Poison Centre

Telephone number : 0870 600 6266 (This service is only available to health professionals)

Manufacturer/ Distributor/ Importer

Telephone number : 01793 511221
Food & Beverage, Institutional, Agri - 01793 548888
Healthcare Leeds - 0113 2322480
Healthcare Swansea - 01252 717616

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]

Not classified.

Classification according to Directive 1999/45/EC [DPD]

The product is not classified as dangerous according to Directive 1999/45/EC and its amendments.

Classification : Not classified.

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

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

2.2 Label elements

Hazard statements : No known significant effects or critical hazards.

Precautionary statements

2.3 Other hazards

Date of issue/Date of revision : 10 January 2013

1/11

SECTION 2: Hazards identification

Other hazards which do not result in classification : Not applicable.

SECTION 3: Composition/information on ingredients**3.2 Mixtures**

| Product/ingredient name | Identifiers | % | Classification | | Type |
|-------------------------|---------------------------------|----|---|---|------|
| | | | 67/548/EEC | Regulation (EC) No. 1272/2008 [CLP] | |
| Sodium chlorite | EC: 231-836-6 CAS: 7758-19-2 | <1 | O; R8 T+; R27 T; R23/25 C; R34 Xi; R41 R32 N; R50 See Section 16 for the full text of the R-phrases declared above. | Acute Tox. 3, H301 Acute Tox. 2, H310 Acute Tox. 2, H330 Skin Corr. 1B, H314 Aquatic Acute 1, H400 See Section 16 for the full text of the H statements declared above. | [1] |

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 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

SECTION 4: First aid measures**4.1 Description of first aid measures**

- Eye contact** : Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Get medical attention if irritation occurs.
- Inhalation** : Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.
- Skin contact** : Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
- Ingestion** : Wash out mouth with water. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Do not induce vomiting unless directed to do so by medical personnel. Get medical attention if symptoms occur.
- Protection of first-aiders** : No action shall be taken involving any personal risk or without suitable training.

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

- Eye contact** : No known significant effects or critical hazards.
- Inhalation** : No known significant effects or critical hazards.
- Skin contact** : No known significant effects or critical hazards.
- Ingestion** : No known significant effects or critical hazards.

SECTION 4: First aid measures

Over-exposure signs/symptoms

- Eye contact** : No specific data.
Inhalation : No specific data.
Skin contact : No specific data.
Ingestion : No specific data.

4.3 Indication of any immediate medical attention and special treatment needed

- Notes to physician** : Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
Specific treatments : No specific treatment.

SECTION 5: Firefighting measures

5.1 Extinguishing media

- Suitable extinguishing media** : In case of fire, use water spray (fog), foam, dry chemical, or CO₂.
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 : No specific data.

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.

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. Keep unnecessary and unprotected personnel from entering. Try to avoid touching or walking through spilt material. Put on appropriate personal protective equipment.
For emergency responders : specialised 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".

6.2 Environmental precautions

- : Avoid dispersal of spilt 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.

SECTION 6: Accidental release measures

- Large spill** : Stop leak if without risk. Move containers from spill area. 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.
- 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).
- Advice on general occupational hygiene** : Workers should wash hands and face before eating, drinking and smoking. See also Section 8 for additional information on hygiene measures.

7.2 Conditions for safe storage, including any incompatibilities

- Store between the following temperatures: 0 to 30°C (32 to 86°F). 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. 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 unlabelled containers. Use appropriate containment to avoid environmental contamination.

7.3 Specific end use(s)

- Recommendations** : Not applicable until Exposure Scenarios for substances become available.
- Industrial sector specific solutions** : Not applicable until Exposure Scenarios for substances become available.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Occupational exposure limits

| Product/ingredient name | Exposure limit values |
|--------------------------------|------------------------------|
| No exposure limit value known. | |

Derived effect levels

No DNELs available for the mixture.

Predicted effect concentrations

No PNECs available for the mixture.

8.2 Exposure controls

- Appropriate engineering controls** : No special ventilation requirements. Good general ventilation should be sufficient to control worker exposure to airborne contaminants. If this product contains ingredients with exposure limits, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure below any recommended or statutory limits.

Individual protection measures

SECTION 8: Exposure controls/personal protection

- 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.
- Eye/face protection (EN 166)** : No special recommendations.
- Skin protection**
- Hand protection (EN 374)** : No special recommendations.
- Body protection (EN 14605)** : Use 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.
- Other skin protection** : Use 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 (EN 143, 14387)** : Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.
- Thermal hazards** : Not applicable.
- 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.
- Colour** : Colourless.
- Odour** : Odourless
- Odour threshold** : Not applicable and/or not determined for the mixture.
- pH** : 6.3 to 6.9 [Conc. (% w/w): 100%]
- 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.
- Flash point** : > 100°C
Product does not support combustion.
- Evaporation rate** : Not applicable and/or not determined for the mixture.
- Flammability (solid, gas)** : Not applicable and/or not determined for the mixture.
- Burning time** : Not applicable and/or not determined for the mixture.
- Burning rate** : Not applicable and/or not determined for the mixture.
- Upper/lower flammability or explosive limits** : Not applicable and/or not determined for the mixture.
- Vapour pressure** : Not applicable and/or not determined for the mixture.
- Vapour density** : Not applicable and/or not determined for the mixture.
- Relative density** : 0.98 to 1.02
- Solubility(ies)** : Easily soluble in the following materials: cold water and hot water.
- Partition coefficient: n-octanol/water** : Not applicable and/or not determined for the mixture.

SECTION 9: Physical and chemical properties

| | |
|----------------------------------|---|
| Auto-ignition temperature | : Not applicable and/or not determined for the mixture. |
| Decomposition temperature | : Not applicable and/or not determined for the mixture. |
| Viscosity | : Not applicable and/or not determined for the mixture. |
| Explosive properties | : Not applicable. |
| Oxidising properties | : None. |

9.2 Other information

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 | : No specific data. |
| 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 |
|-------------------------|---------------------------------|---------|-----------------------|----------|
| Sodium chlorite | LC50 Inhalation Dusts and mists | Rat | 0.29 mg/l | 4 hours |
| | LC50 Inhalation Dusts and mists | Rat | 230 mg/m ³ | 4 hours |
| | LD50 Dermal | Rabbit | 134 mg/kg | - |
| | LD50 Oral | Rat | 165 mg/kg | - |
| | LD50 Oral | Rat | 284 mg/kg | - |

Conclusion/Summary : No known significant effects or critical hazards.**Acute toxicity estimates**

| Route | ATE value |
|------------------------------|---------------|
| Oral | 35675.7 mg/kg |
| Dermal | 28973 mg/kg |
| Inhalation (gases) | 151351.4 ppm |
| Inhalation (vapours) | 108.1 mg/l |
| Inhalation (dusts and mists) | 108.1 mg/l |

Irritation/Corrosion**Conclusion/Summary** : No known significant effects or critical hazards.**Sensitiser****Conclusion/Summary** : No known significant effects or critical hazards.**Mutagenicity****Conclusion/Summary** : No known significant effects or critical hazards.

SECTION 11: Toxicological information

Carcinogenicity

Conclusion/Summary : No known significant effects or critical hazards.

Reproductive toxicity

Conclusion/Summary : No known significant effects or critical hazards.

Teratogenicity

Conclusion/Summary : No known significant effects or critical hazards.

Specific target organ toxicity (single exposure)

No known significant effects or critical hazards.

Specific target organ toxicity (repeated exposure)

No known significant effects or critical hazards.

Aspiration hazard

No known significant effects or critical hazards.

Information on the likely routes of exposure : No known significant effects or critical hazards.

Potential acute health effects

Inhalation : No known significant effects or critical hazards.

Ingestion : No known significant effects or critical hazards.

Skin contact : No known significant effects or critical hazards.

Eye contact : No known significant effects or critical hazards.

Symptoms related to the physical, chemical and toxicological characteristics

Inhalation : No specific data.

Ingestion : No specific data.

Skin contact : No specific data.

Eye contact : No specific data.

Delayed and immediate effects and also chronic effects from short and long term exposure

Short term exposure

Potential immediate effects : No known significant effects or critical hazards.

Potential delayed effects : No known significant effects or critical hazards.

Long term exposure

Potential immediate effects : No known significant effects or critical hazards.

Potential delayed effects : No known significant effects or critical hazards.

Potential chronic health effects

Conclusion/Summary : No known significant effects or critical hazards.

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 : No known significant effects or critical hazards.

SECTION 12: Ecological information**12.1 Toxicity**

| Product/ingredient name | Result | Species | Exposure |
|-------------------------|---|------------------------------|----------|
| Sodium chlorite | Acute EC50 0.0146 to 0.018 ppm Fresh water | Daphnia - Daphnia magna | 48 hours |
| | Acute EC50 <1 mg/l | Fish | 48 hours |
| | Acute LC50 75 to 90 ppm Marine water | Fish - Cyprinodon variegatus | 96 hours |

Conclusion/Summary : No known significant effects or critical hazards.

12.2 Persistence and degradability

Conclusion/Summary : Not affected, inorganic product.

12.3 Bioaccumulative potential

Conclusion/Summary : Not determined for the mixture.

12.4 Mobility in soil

Soil/water partition coefficient (K_{oc}) : Not determined for the mixture.

Mobility : Not determined for the mixture.

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 minimised wherever possible. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe way. Significant quantities of waste product residues should not be disposed of via the foul sewer but processed in a suitable effluent treatment plant. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. 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. Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers.

Hazardous waste : Yes.

European waste catalogue (EWC)

| Waste code | Waste designation |
|------------|--|
| 20 01 29* | detergents containing dangerous substances |

Packaging

Methods of disposal : The generation of waste should be avoided or minimised wherever possible. Waste packaging should be recycled.

SECTION 13: Disposal considerations

Special precautions : This material and its container must be disposed of in a safe way. Empty containers or liners may retain some product residues. Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers.

SECTION 14: Transport information

| | ADR/RID | ADN/ADNR | IMDG | IATA |
|--|----------------|-----------------|----------------|----------------|
| 14.1 UN number | Not regulated. | Not regulated. | Not regulated. | Not regulated. |
| 14.2 UN proper shipping name | - | - | - | - |
| 14.3 Transport hazard class(es) | - | - | - | - |
| 14.4 Packing group | - | - | - | - |
| 14.5 Environmental hazards | No. | No. | No. | No. |
| 14.6 Special precautions for user | None. | None. | None. | None. |

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

SECTION 15: Regulatory information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture
EU Regulation (EC) No. 1907/2006 (REACH)

Annex XIV - List of substances subject to authorisation

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

| |
|--|
| |
|--|

National regulations

United Kingdom (UK)

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

SECTION 15: Regulatory information

15.2 Chemical Safety Assessment : This product contains substances for which Chemical Safety Assessments are still required.

SECTION 16: Other information

☑ Indicates information that has changed from previously issued version.

Abbreviations and acronyms :

- ADN/ADNR = European Provisions concerning the International Carriage of Dangerous Goods by Inland Waterway
- ADR = The European Agreement concerning the International Carriage of Dangerous Goods by Road
- ATE = Acute Toxicity Estimate
- BCF = Bioconcentration Factor
- CLP = Classification, Labelling and Packaging Regulation [Regulation (EC) No. 1272/2008]
- DNEL = Derived No Effect Level
- DPD = Dangerous Preparations Directive [1999/45/EC]
- EC = European Commission
- EUH statement = CLP-specific Hazard statement
- IATA = International Air Transport Association
- IBC = Intermediate Bulk Container
- IMDG = International Maritime Dangerous Goods
- LogPow = logarithm of the octanol/water partition coefficient
- MARPOL 73/78 = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution)
- OEL = Occupational Exposure Limit
- PBT = Persistent, Bioaccumulative and Toxic
- PNEC = Predicted No Effect Concentration
- REACH = Registration, Evaluation, Authorisation and Restriction of Chemicals Regulation [Regulation (EC) No. 1907/2006]
- RID = The Regulations concerning the International Carriage of Dangerous Goods by Rail
- REACH # = REACH Registration Number
- vPvB = Very Persistent and Very Bioaccumulative

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

| Classification | Justification |
|-----------------|---------------|
| Not classified. | |

Full text of abbreviated H statements :

- ☑ H301 Toxic if swallowed.
- H310 Fatal in contact with skin.
- H314 Causes severe skin burns and eye damage.
- H330 Fatal if inhaled.
- H400 Very toxic to aquatic life.

Full text of classifications [CLP/GHS] :

- ☑ Acute Tox. 2, H310 ACUTE TOXICITY: SKIN - Category 2
- Acute Tox. 2, H330 ACUTE TOXICITY: INHALATION - Category 2
- Acute Tox. 3, H301 ACUTE TOXICITY: ORAL - Category 3
- Aquatic Acute 1, H400 AQUATIC TOXICITY (ACUTE) - Category 1
- Skin Corr. 1B, H314 SKIN CORROSION/IRRITATION - Category 1B

Full text of abbreviated R phrases :

- ☑ R8- Contact with combustible material may cause fire.
- R27- Very toxic in contact with skin.
- R23/25- Toxic by inhalation and if swallowed.
- R34- Causes burns.
- R41- Risk of serious damage to eyes.
- R32- Contact with acids liberates very toxic gas.
- R50- Very toxic to aquatic organisms.

SECTION 16: Other information

Full text of classifications [DSD/DPD] : - Oxidising
T+ - Very toxic
T - Toxic
C - Corrosive
Xi - Irritant
N - Dangerous for the environment

Date of printing : 10 January 2013

Date of issue/ Date of revision : 10 January 2013

Date of previous issue : 16 January 2012

Version : 1.11

Notice to reader

The above information is believed to be correct with respect to the formula used to manufacture the product in the country of origin. As data, standards, and regulations change, and conditions of use and handling are beyond our control, NO WARRANTY, EXPRESS OR IMPLIED, IS MADE AS TO THE COMPLETENESS OR CONTINUING ACCURACY OF THIS INFORMATION.