

Mikro Chlor**SECTION 1: Identification of the substance/mixture and of the company/
undertaking****1.1 Product identifier**

Product name : Mikro Chlor
Product code : 114786E
Product use : Surface Disinfectant
Product is for professional use only

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

Identified uses
Surface disinfectant. Manual process
Uses advised against
None known.

1.3 Details of the supplier of the safety data sheet

Manufacturer/ Distributor/ : Ecolab Ltd.
Importer : 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]

Skin Corr. 1B, H314
 Aquatic Chronic 2, H411

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

The product is classified as dangerous according to Directive 1999/45/EC and its amendments.

Classification : Xi; R41, R38
 R31
 N; R51/53

Human health hazards : Risk of serious damage to eyes. Irritating to skin. Contact with acids liberates toxic gas.

Environmental hazards : Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

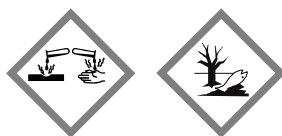
See Section 16 for the full text of the R phrases or H statements declared above.

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

SECTION 2: Hazards identification

2.2 Label elements

Hazard pictograms :



Signal word : Danger

Contains : Sodium metasilicate

Hazard statements : H314 Causes severe skin burns and eye damage.
H411 Toxic to aquatic life with long lasting effects.

Precautionary statements

Prevention : P260 - Do not breathe dust.
P273 - Avoid release to the environment.
P280 - Wear protective gloves and eye/face protection.

Response : P303 + P361 + P353 - IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower.
P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P310 - Immediately call a POISON CENTER or doctor/physician.

Supplemental label elements : EUH031 - Contact with acids liberates toxic gas.

2.3 Other hazards

Other hazards which do not result in classification : Handling and/or processing of this material may generate a dust which can cause mechanical irritation of the eyes, skin, nose and throat.

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 Carbonate (soda)	REACH #: 01-2119485498-19 EC: 207-838-8 CAS: 497-19-8 Index: 011-005-00-2	10 - <20	Xi; R36	Eye Irrit. 2, H319	[1]
Troclosene sodium, dihydrate	REACH #: 01-2119489371-33 EC: 220-767-7 CAS: 51580-86-0 Index: 613-030-00-X	2.5 - <10	E; R2 O; R8 Xn; R22 Xi; R36/37 R31 N; R50/53	Ox. Sol. 2, H272 Acute Tox. 4, H302 Eye Irrit. 2, H319 STOT SE 3, H335 Aquatic Acute 1, H400 Aquatic Chronic 1, H410	[1]
Sodium metasilicate	REACH #: 01-2119449811-37 EC: 229-912-9 CAS: 6834-92-0 Index: 014-010-00-8	5 - <7	Xn; R22 C; R34 Xi; R37	Acute Tox. 4, H302 Skin Corr. 1B, H314 STOT SE 3, H335	[1]
Linear Alkylbenzenesulphonates	EC: 246-680-4 CAS: 25155-30-0	3 - <5	Xn; R22 Xi; R41, R37/38	Acute Tox. 4, H302 Skin Irrit. 2, H315 Eye Dam. 1, H318 STOT SE 3, H335	[1]
Fattyalcohol	-	1 - <3	Xn; R22	Acute Tox. 4, H302	[1]

Date of issue/Date of revision : 17 December 2013

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SECTION 3: Composition/information on ingredients

ethoxylates > 5EO			Xi; R41	Eye Dam. 1, H318	
			See Section 16 for the full text of the R-phrases declared above.	See Section 16 for the full text of the H statements declared above.	

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
 [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** : 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 15 minutes. Chemical burns must be treated promptly by a physician. Get medical attention immediately. Call a poison center or physician.
- Inhalation** : Remove victim to fresh air and keep at rest in a position comfortable for breathing. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. 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. Get medical attention immediately. Call a poison center or physician.
- Skin contact** : Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Continue to rinse for at least 15 minutes. Chemical burns must be treated promptly by a physician. Wash contaminated clothing before reusing. Clean shoes thoroughly before reuse. Get medical attention immediately. Call a poison center or physician.
- Ingestion** : Wash out mouth with water. Remove dentures if any. 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. Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention immediately. Call a poison center or physician.
- Protection of first-aiders** : No action shall be taken involving any personal risk or without suitable training. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.

4.2 Most important symptoms and effects, both acute and delayedPotential acute health effects

SECTION 4: First aid measures

- Eye contact** : Causes serious eye damage.
- Inhalation** : May give off gas, vapour or dust that is very irritating or corrosive to the respiratory system. Exposure to decomposition products may cause a health hazard. Serious effects may be delayed following exposure.
- Skin contact** : Causes severe burns.
- Ingestion** : Corrosive to the digestive tract. Causes burns. May cause burns to mouth, throat and stomach.

Over-exposure signs/symptoms

- Eye contact** : Adverse symptoms may include the following:
pain
watering
redness
- Inhalation** : Adverse symptoms may include the following:
respiratory tract irritation
coughing
- 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.
- 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** : Fine dust clouds may form explosive mixtures with air. This material is toxic to aquatic life with long lasting effects. Fire water contaminated with this material must be contained and prevented from being discharged to any waterway, sewer or drain.
- Hazardous combustion products** : Decomposition products may include the following materials:
carbon dioxide
carbon monoxide
nitrogen oxides
sulfur oxides
phosphorus oxides
halogenated compounds
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. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool.

SECTION 5: Firefighting measures

- 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. Shut off all ignition sources. No flares, smoking or flames in hazard area. Do not breathe dust. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.
- 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. 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). Water polluting material. May be harmful to the environment if released in large quantities. Collect spillage.

6.3 Methods and materials for containment and cleaning up

- Small spill:** : Move containers from spill area. Vacuum or sweep up material and place in a designated, labelled waste container.
- Large spill** : Move containers from spill area. Approach the release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Vacuum or sweep up material and place in a designated, labelled waste container. Avoid creating dusty conditions and prevent wind dispersal.

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 dust. Do not ingest. Avoid release to the environment. Avoid the creation of dust when handling and avoid all possible sources of ignition (spark or flame). Prevent dust accumulation. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use.
- 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.

SECTION 7: Handling and storage

7.2 Conditions for safe storage, including any incompatibilities : Store between the following temperatures: 0 to 40°C (32 to 104°F). Store in accordance with local regulations. Store in a segregated and approved area. 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. Eliminate all ignition sources. Separate from oxidizing materials. 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 : Use only with adequate ventilation. If user operations generate dust, fumes, gas, vapour 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. The engineering controls also need to keep gas, vapour or dust concentrations below any lower explosive limits. Use explosion-proof ventilation equipment.

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.

Eye/face protection (EN 166) : Highly recommended : Goggles, face shield, or other full-face protection.

Skin protection

Hand protection (EN 374) : Highly recommended : Gloves - butyl rubber , nitrile rubber (Breakthrough time: 1 - 4 hours) .

Body protection (EN 14605) : 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 : 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.

SECTION 8: Exposure controls/personal protection

- 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** : Powder
- Colour** : White
- Odour** : chlorine
- Odour threshold** : Not applicable and/or not determined for the mixture.
- pH** : 10.1 to 10.5 [Conc. (% w/w): 1%]
- 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
- 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** : 0.95 to 1.15
- 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.
- 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** : Yes.

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** : Avoid the creation of dust when handling and avoid all possible sources of ignition (spark or flame). Take precautionary measures against electrostatic discharges. To avoid fire or explosion, dissipate static electricity during transfer by earthing and bonding containers and equipment before transferring material. Prevent dust accumulation.
- 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 Carbonate(soda)	LC50 Inhalation Dusts and mists	Rat	1.15 mg/l	4 hours
	LD50 Dermal	Rabbit	>2000 mg/kg	-
	LD50 Oral	Rat	2800 mg/kg	-
Troclosene sodium, dihydrate	LD50 Dermal	Rat	>5000 mg/kg	-
	LD50 Oral	Rat	1823 mg/kg	-
Sodium metasilicate Linear	LD50 Oral	Rat	500 mg/kg	-
Alkylbenzenesulphonates	LD50 Dermal	Rat	>2000 mg/kg	-
	LD50 Oral	Rat	1086 mg/kg	-

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

Acute toxicity estimates

Not determined for the mixture.

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.

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.

SECTION 11: Toxicological information**Specific target organ toxicity (single exposure)**

Product/ingredient name	Category	Route of exposure	Target organs
Troclosene sodium, dihydrate	Category 3	Not applicable.	Respiratory tract irritation
Sodium metasilicate	Category 3	Not applicable.	Respiratory tract irritation
Linear Alkylbenzenesulphonates	Category 3	Not applicable.	Respiratory tract irritation

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** : May give off gas, vapour or dust that is very irritating or corrosive to the respiratory system. Exposure to decomposition products may cause a health hazard. Serious effects may be delayed following exposure.
- Ingestion** : Corrosive to the digestive tract. Causes burns. May cause burns to mouth, throat and stomach.
- Skin contact** : Causes severe burns.
- Eye contact** : Causes serious eye damage.

Symptoms related to the physical, chemical and toxicological characteristics

- Inhalation** : Adverse symptoms may include the following:
respiratory tract irritation
coughing
- 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

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 : Repeated or prolonged inhalation of dust may lead to chronic respiratory irritation.

SECTION 11: Toxicological information

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 Carbonate(soda)	Acute EC50 200 mg/l	Daphnia	48 hours
Troclosene sodium, dihydrate	Acute EC50 0.196 mg/l	Daphnia	48 hours
Sodium metasilicate	Acute LC50 210 mg/l	Fish	96 hours
Linear	Acute LC50 3.2 mg/l	Fish	96 hours
Alkylbenzenesulphonates			

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

12.2 Persistence and degradability

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

12.3 Bioaccumulative potential

Product/ingredient name	LogP _{ow}	BCF	Potential
Linear Alkylbenzenesulphonates	1.96	-	low

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**

SECTION 13: Disposal considerations

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 15*	alkalines

Packaging

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

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 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	UN3262	UN3262	UN3262	UN3262
14.2 UN proper shipping name	CORROSIVE SOLID, BASIC, INORGANIC, N.O.S. (Sodium metasilicate, Troclosene sodium, dihydrate)	CORROSIVE SOLID, BASIC, INORGANIC, N.O.S. (Sodium metasilicate, Troclosene sodium, dihydrate)	CORROSIVE SOLID, BASIC, INORGANIC, N.O.S. (Sodium metasilicate, Troclosene sodium, dihydrate). Marine pollutant	Corrosive solid, basic, inorganic, n.o.s. (Sodium metasilicate, Troclosene sodium, dihydrate)
14.3 Transport hazard class(es)	8  	8  	8  	8  
14.4 Packing group	III	III	III	III
14.5 Environmental hazards	Yes.	Yes.	Yes.	Yes.
14.6 Special precautions for user	None.	None.	None.	None.

SECTION 14: Transport information

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.

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 = 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]

Date of issue/Date of revision : 17 December 2013

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SECTION 16: Other information

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
Skin Corr. 1B, H314 Aquatic Chronic 2, H411	Expert judgment Expert judgment

Full text of abbreviated H statements	: H272 H302 H314 H315 H318 H319 H335 H400 H410 H411	May intensify fire; oxidiser. Harmful if swallowed. Causes severe skin burns and eye damage. Causes skin irritation. Causes serious eye damage. Causes serious eye irritation. May cause respiratory irritation. Very toxic to aquatic life. Very toxic to aquatic life with long lasting effects. Toxic to aquatic life with long lasting effects.
Full text of classifications [CLP/GHS]	: Acute Tox. 4, H302 Aquatic Acute 1, H400 Aquatic Chronic 1, H410 Aquatic Chronic 2, H411 Eye Dam. 1, H318 Eye Irrit. 2, H319 Ox. Sol. 2, H272 Skin Corr. 1B, H314 Skin Irrit. 2, H315 STOT SE 3, H335	ACUTE TOXICITY: ORAL - Category 4 AQUATIC TOXICITY (ACUTE) - Category 1 AQUATIC TOXICITY (CHRONIC) - Category 1 AQUATIC TOXICITY (CHRONIC) - Category 2 SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 1 SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 2 OXIDIZING SOLIDS - Category 2 SKIN CORROSION/IRRITATION - Category 1B SKIN CORROSION/IRRITATION - Category 2 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) [Respiratory tract irritation] - Category 3
Full text of abbreviated R phrases	: R2- Risk of explosion by shock, friction, fire or other sources of ignition. R8- Contact with combustible material may cause fire. R22- Harmful if swallowed. R34- Causes burns. R41- Risk of serious damage to eyes. R36- Irritating to eyes. R37- Irritating to respiratory system. R38- Irritating to skin. R36/37- Irritating to eyes and respiratory system. R37/38- Irritating to respiratory system and skin. R31- Contact with acids liberates toxic gas. R50/53- Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment. R51/53- Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.	
Full text of classifications [DSD/DPD]	: E - Explosive O - Oxidising C - Corrosive Xn - Harmful Xi - Irritant N - Dangerous for the environment	
Date of printing	: 17 December 2013	
Date of issue/ Date of revision	: 17 December 2013	
Date of previous issue	: 3 October 2011	
Version	: 3	

SECTION 16: Other information

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.**