SECTION 1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1 Product identifier

Product name	:	Mould-Ex
Product code	:	111800E
Use of the Substance/Mixture	:	Bleach
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	:	Sanitary cleaner. Manual process
Recommended restrictions on use	:	Reserved for industrial and professional use.

1.3 Details of the supplier of the safety data sheet

Company	:	Ecolab Ltd. PO Box 11; Winnington Avenue Northwich, Cheshire, United Kingdom CW8 4DX + 44 (0)1606 74488 ccs@ecolab.com

1.4 Emergency telephone number

Emergency telephone number	:	Food & Beverage, Institutional, Agriculture, Textile Hygiene: Northwich: +44 (0)1606 74488 Healthcare Leeds: +44 (0)113 232 2480 Healthcare Swansea: +44 (0)1252 717616
Poison Information Centre telephone number	:	Not Available
Date of Compilation/Revision	:	18.06.2014
version	:	1.0

SECTION 2. HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

Classification (REGULATION (EC) No 1272/2008)

Skin corrosion , Category 1A	H314
Acute aquatic toxicity , Category 1	H400

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

C; CORROSIVE	R31
N; DANGEROUS FOR THE ENVIRONMENT	R35

The classification of this product is based only on its extreme pH value (in accordance with current European legislation). R50

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

2.2 Label elements

Labelling (REGULATION (EC) No 1272/2008)

Hazard pictograms :

Signal Word : Danger

Hazard Statements :
H314 Causes severe skin burns and eye damage.
H400 Very toxic to aquatic life.

Precautionary Statements :

Prevention:

P273 Avoid release to the environment.
P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.

Response:

P303 + P361 + P353 IF ON SKIN (or hair): Remove/ Take off immediately all contaminated clothing. Rinse skin with water/ 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.

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. EC-No. REACH No.	Classification (67/548/EEC)	Classification (REGULATION (EC) No 1272/2008)	Concentration: [%]
sodium hypochlorite	7681-52-9 231-668-3 01-2119488154-34	C-N; R31-R34-R50	Skin corrosionCategory 1B; H314 Acute aquatic toxicityCategory 1; H400	>= 5.2 - < 10
potassium hydroxide	1310-58-3 215-181-3 01-2119487136-33	C; R22-R35	Acute toxicityCategory 4; H302 Skin corrosionCategory 1A;	>= 1 - < 2

			H314	
Alkylamineoxides	68955-55-5 273-281-2	Xn-Xi; R22-R36-R38	Acute toxicityCategory 4; H302 Skin irritationCategory 2; H315 Eye irritationCategory 2; H319	>= 1 - < 2.5

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

SECTION 4. FIRST AID MEASURES

4.1 Description of first aid measures

In case of eye contact : Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention immediately.

In case of skin contact : Wash off immediately with plenty of water for at least 15 minutes. Use a mild soap if available. Wash clothing before reuse. Thoroughly clean shoes before reuse. Get medical attention immediately.

If swallowed : Rinse mouth with water. Do NOT induce vomiting. Never give anything by mouth to an unconscious person. 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 firefighting : Not flammable or combustible.

Hazardous combustion products : Decomposition products may include the following materials:
Carbon oxides
nitrogen oxides (NOx)

Sulphur oxides
Oxides of phosphorus

5.3 Advice for firefighters

Special protective equipment for firefighters	:	Use personal protective equipment.
Further information	:	Collect contaminated fire extinguishing water separately. This must not be discharged into drains. Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations. In the event of fire and/or explosion do not breathe fumes.

SECTION 6. ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

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

6.2 Environmental precautions

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

6.3 Methods and materials for containment and cleaning up

Methods for cleaning up	:	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. Do not breathe dust/fume/gas/mist/vapours/spray. Wash hands thoroughly after handling. Mixing this product with acid or ammonia releases chlorine gas.
Hygiene measures	:	Handle in accordance with good industrial hygiene and safety

practice. Remove and wash contaminated clothing before re-use. Wash face, hands and any exposed skin thoroughly after handling. Provide suitable facilities for quick drenching or flushing of the eyes and body in case of contact or splash hazard.

7.2 Conditions for safe storage, including any incompatibilities

Requirements for storage areas and containers : Do not store near acids. Keep out of reach of children. Keep container tightly closed. Store in suitable labeled containers.

Storage temperature : 0 °C to 25 °C

7.3 Specific end use(s)

Specific use(s) : Sanitary cleaner. Manual 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
1310-58-3	potassium hydroxide	STEL	2 mg/m3	2005-04-06	UKCOSSTD

8.2 Exposure controls

Appropriate engineering controls

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

Individual protection measures

Hygiene measures : Handle in accordance with good industrial hygiene and safety practice. Remove and wash contaminated clothing before re-use. Wash face, hands and any exposed skin thoroughly after handling. Provide suitable facilities for quick drenching or flushing of the eyes and body in case of contact or splash hazard.

Eye/face protection (EN 166) : Safety goggles
Face-shield

Hand protection (EN 374) : Wear the following personal protective equipment:
Nitrile rubber
butyl-rubber
Impervious gloves
Gloves should be discarded and replaced if there is any indication of degradation or chemical breakthrough.

Skin and body protection (EN 14605) : Personal protective equipment comprising: suitable protective gloves, safety goggles and protective clothing

Respiratory protection (EN : None required if airborne concentrations are maintained below the

143, 14387)	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	:	yellow
Odour	:	Chlorine
pH	:	12.5 - 13.5, 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	:	1.08 - 1.18
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	:	Yes

9.2 Other information

no data available

SECTION 10. STABILITY AND REACTIVITY

10.1 Reactivity

No dangerous reaction known under conditions of normal use.

10.2 Chemical stability

Stable under normal conditions.

10.3 Possibility of hazardous reactions

Mixing this product with acid or ammonia releases chlorine gas.

10.4 Conditions to avoid

None known.

10.5 Incompatible materials

Acids

10.6 Hazardous decomposition products

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

SECTION 11. TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

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

Toxicity

Acute oral toxicity	:	Acute toxicity estimate : > 2,000 mg/kg
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.
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	:	sodium hypochlorite LD50 rat: 5,230 mg/kg Alkylamineoxides LD50 rat: 1,303 mg/kg
Acute inhalation toxicity	:	sodium hypochlorite 1 h LC50 rat: > 10,500 mg/l
Acute dermal toxicity	:	sodium hypochlorite LD50 rabbit: > 10,000 mg/kg

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 exposure

Eye contact	:	Redness, Pain, Corrosion
Skin contact	:	Redness, Pain, Corrosion
Ingestion	:	Corrosion, Abdominal pain
Inhalation	:	Respiratory irritation, Cough

SECTION 12. ECOLOGICAL INFORMATION

12.1 Ecotoxicity

Environmental Effects	:	Very toxic to aquatic life.

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	:	potassium hydroxide 96 h LC50: 80 mg/l

Alkylamineoxides
96 h LC50: 1.5 mg/l

12.2 Persistence and degradability

no data available

12.3 Bioaccumulative potential

no data available

12.4 Mobility in soil

no data available

12.5 Results of PBT and vPvB assessment

Product

Assessment	:	This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

12.6 Other adverse effects

no data available

SECTION 13. DISPOSAL CONSIDERATIONS

Dispose of in accordance with the European Directives on waste and hazardous waste.Waste codes should be assigned by the user, preferably in discussion with the waste disposal authorities.

13.1 Waste treatment methods

Product	:	The product should not be allowed to enter drains, water courses or the soil. Where possible recycling is preferred to disposal or incineration. If recycling is not practicable, dispose of in compliance with local regulations. Dispose of wastes in an approved waste disposal facility.
Contaminated packaging	:	Dispose of as unused product. Empty containers should be taken to an approved waste handling site for recycling or disposal. Do not re-use empty containers.
European Waste Catalogue	:	200129* - detergents containing dangerous substances

SECTION 14. TRANSPORT INFORMATION

The shipper/consignor/sender is responsible to ensure that the packaging, labeling, and markings are in compliance with the selected mode of transport.

Land transport (ADR/ADN/RID)

14.1 UN number	:	3266
14.2 UN proper shipping name	:	CORROSIVE LIQUID, BASIC, INORGANIC, N.O.S. (sodium hypochlorite, Potassium hydroxide)

14.3 Transport hazard class(es)	:	8
14.4 Packing group	:	III
14.5 Environmental hazards	:	Yes
14.6 Special precautions for user	:	None

Air transport (IATA)

14.1 UN number	:	3266
14.2 UN proper shipping name	:	Corrosive liquid, basic, inorganic, n.o.s. (sodium hypochlorite, Potassium hydroxide)
14.3 Transport hazard class(es)	:	8
14.4 Packing group	:	III
14.5 Environmental hazards	:	Yes
14.6 Special precautions for user	:	None

Sea Transport (IMDG/IMO)

14.1 UN number	:	3266
14.2 UN proper shipping name	:	CORROSIVE LIQUID, BASIC, INORGANIC, N.O.S. (sodium hypochlorite, Potassium hydroxide)
14.3 Transport hazard class(es)	:	8
14.4 Packing group	:	III
14.5 Environmental hazards	:	Yes
14.6 Special precautions for user	:	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

according to Detergents Regulation EC 648/2004	:	5 % or over but less than 15 %: Chlorine-based bleaching agents less than 5 %: Anionic surfactants, Non-ionic surfactants Allergens: d-Limonene

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

R22	Harmful if swallowed.
R31	Contact with acids liberates toxic gas.
R34	Causes burns.
R35	Causes severe burns.
R36	Irritating to eyes.
R38	Irritating to skin.
R50	Very toxic to aquatic organisms.

Full text of H-Statements

H302	Harmful if swallowed.
H314	Causes severe skin burns and eye damage.
H315	Causes skin irritation.
H319	Causes serious eye irritation.
H400	Very toxic to aquatic life.

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	potassium hydroxide	1310-58-3	215-181-3
Inhalation	sodium hypochlorite	7681-52-9	231-668-3
Dermal	potassium hydroxide	1310-58-3	215-181-3
Eyes	potassium hydroxide	1310-58-3	215-181-3
aquatic environment	sodium hypochlorite	7681-52-9	231-668-3

Physical properties DPD+ Substances:

Substance	Vapour pressure	Water solubility	POW	Molar Mass
potassium hydroxide	1 Pa	1,120 g/l		56.11 g/mol
sodium hypochlorite	25 hPa	1,000 g/l		

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

www.ecetoc.org/tra

Short title of Exposure Scenario : **Sanitary cleaner. 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