

Material Safety Data Sheet

eOxide® LQ85 Aqueous Solution ClO₂ 0,85%

Issue: 2016.1

Last Updated: 27/06/2016

eOx International b.v.

Products to Perform

1e Lulofsdwarstraat 117, 2521 AZ Den Haag, Nederland

Phone: +31 (0)70 380 07 75 Mail: info@eox-international.com





EOX[®] eOxide[®] LQ85

eOX[®]

Aqueous Solution ClO₂ 0,85%

SAFETY DATA SHEET

according to Regulation (EC) No. 453/210

Version 2016.1 Revision Date 27.06.2016

Print date 27.06.2016

GENERIC EU MSDS – NO COUNTRY SPECIFIC DATA – NO OEL DATA

1. Identification of the substance or the preparation and of the company.

1.1 Product identification:

Registration Number :

N/A

Product name :

EOX[®] eOxide LQ85 Aqueous Solution ClO₂ 0,85%

Trade names

N/A

Relevant identified uses

Product after generating chlorine dioxide in a 0,85% solution in water, with eOxide LQ 85 component A and eOxide LQ85 component B

Relevant identified uses of the substance or mixture and dissuade use:

Relevant identified uses:

eOX[®] EOXIDE LQ 85 is a concept to generate, in situ, chlorine dioxide solution of 0,85% in water by the reaction of 2 stable liquids

1.2 Details of the supplier of the safety data sheet

eOx International b.v.

1e Lulofsdwarsstraat 117

P.O. Box 16480

2500 BL Den Haag – The Netherlands

E-mail: info@eox-international.com

Tel. +31 (0) 70 – 380 07 75

Fax +31 (0) 70 – 384 14 76

1.3 Emergency telephone number:

eOx International +31 (0) 70 380 07 75

CHEMTREC +1-703-527-3887



EOX[®] eOxide[®] LQ85

eOX[®]

Aqueous Solution ClO₂ 0,85%

SAFETY DATA SHEET

according to Regulation (EC) No. 453/210

Version 2016.1 Revision Date 27.06.2016

Print date 27.06.2016

GENERIC EU MSDS – NO COUNTRY SPECIFIC DATA – NO OEL DATA

2. Identification of the risks

2.1 Classification of the substance/mixture:

Classification according to Regulation (EG) nr. 1272/2008

Eye Irrit.

category 2 – Danger (Eye Irrit. 2; H319)

Signal words: GHS07



SIGNAL Word: Warning

HAZARD STATEMENT

H319 Causes serious eye irritation.

Information to special dangers for human and environment

A gaseous phase with chlorine dioxide is formed over the prepared solution, which possesses the following dangerous:

H331 Toxic if inhaled

H314 Causes severe skin burns and eye damage.

H400 Very toxic to aquatic life.

These hazards are to be considered while handling this product

PRECAUTIONARY MEASURES

H319 Causes serious eye irritation.

P280 Wear protective gloves/protective clothing/eye protection/face protection.

P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P337 + P313 If eye irritation persists: Get medical advice/attention.



EOX[®] eOxide[®] LQ85



Aqueous Solution ClO₂ 0,85%

SAFETY DATA SHEET

according to Regulation (EC) No. 453/210

Version 2016.1 Revision Date 27.06.2016

Print date 27.06.2016

GENERIC EU MSDS – NO COUNTRY SPECIFIC DATA – NO OEL DATA

3. Composition and information on ingredients

3.1 Substances mixture

Ingredient:	Weight %	Information :
chlorine dioxide, solution	0.3-<3	CAS Nr. 10049-04-4 EINECS 233-162-8 EG annex-Nr. 006-089-01-X REACH Reg. Nr. 01-2119492305-37-0000 CLP Classification Acute Tox.3*, Skin Corr. 1B, Aquatic Acute 1 Icon GHS05, GHS06; GHS09 H-phrases H301, H314, H400 Symbol N, C R-phrases R50-R36



EOX[®] eOxide[®] LQ85

eOX[®]

Aqueous Solution ClO₂ 0,85%

SAFETY DATA SHEET

according to Regulation (EC) No. 453/210

Version 2016.1 Revision Date 27.06.2016

Print date 27.06.2016

GENERIC EU MSDS – NO COUNTRY SPECIFIC DATA – NO OEL DATA

4. First aid measures.

Contact with the eyes

Immediately rinse the eyes with opened eyelid long enough (minimum 15 minutes) with lukewarm water if possible. Look for the presence of contact lenses and remove them. Then consult a (eye-) doctor. (Keep on rinsing if possible)

Contact with the skin

In case of contact wash immediately with water and soap. Remove contaminated clothing immediately, rinse skin with plenty of water or shower. Obtain medical attention if irritation of skin develops. Wash garment before using again.

Ingestion

DO NOT INDUCE VOMITING Rinse mouth with water (Never give an unconscious to drink because of risk of choking) Loosen tight fitting clothes, such as shirt, collar, necktie or belt. Call for a doctor immediately

Inhaling aerosol or vapour

Bring person in fresh air, keep warm and relaxed. If the victim is not breathing, administer artificial respiration and seek medical advice immediately or take to hospital.

5. Fire fighting measures

Suitable extinguishing media

Lots of water, Foam, carbon dioxide (CO₂)

Unusual fire/explosion hazards

On heating/burning: release of toxic and corrosive gases/vapors: Hydrogen chloride (HCl), Chlorine (Cl₂), Dioxine, Phosgene

Instructions

Cool tanks/drums with water spray/remove them into safety
Dilute toxic gases with water spray

Protection of fire fighters

In the immediate vicinity of the fire use a self-contained breathing device.

6. measures by the accidental release of the substance or preparation

Personal precautions

Evacuate personnel immediately and ensure adequate ventilation. Avoid inhalation of vapors and contact with eyes, skin and clothing. Wear appropriate personal protective equipment. (See Section 8)

Environmental precautions

Stop leaks if possible without risk.
Spills of chlorine dioxide solutions should be diluted to a low concentration using copious amounts of water.

Cleaning Methods

Dilute with copious amounts of water. Contact expert assistance in the event of major releases. Inform the local emergency services.



EOX[®] eOxide[®] LQ85

eOX[®]

Aqueous Solution ClO₂ 0,85%

SAFETY DATA SHEET

according to Regulation (EC) No. 453/210
Version 2016.1 Revision Date 27.06.2016

Print date 27.06.2016

GENERIC EU MSDS – NO COUNTRY SPECIFIC DATA – NO OEL DATA

7. Handling and storage

Handling

The usual precautionary measures when handling chemicals should be respected.

Avoid inhalation of vapors and contact with eyes, skin and clothing
Wear suitable personal protective equipment. (See Section 8)

Avoid splashing and vapor formation when emptying, pouring, diluting or dissolving the product.

Vessels and tools which are used may not be contaminated in processing of the product.

Do not eat, drink or smoke while working.

In the immediate vicinity of any potential source of exposure there must be safety goggles and emergency showers available.

Storage

Keep only in original container tightly closed in a dry, well ventilated and fireproof place.

Do not store with acids, alkalis or combustible materials

NOT IN DIRECT SUNLIGHT

All hazardous products must be placed on a drip tray.

Keep away from: metals, reducing agents, strong bases.
Store above 10 ° C (frost Free)(Crystallization)

Storage together with other substances

Keep separate from acids, alkalis or combustible materials

Packaging materials recommended

Polyethylene, plastics, (Small quantities: Glass)

Packaging materials NOT recommended

Steel, Copper, Copper and its alloys, Aluminium and its alloys, Rubber

Further information on storage conditions

STORAGE GROUP 6.1BL
FIRE CLASS B



SAFETY DATA SHEET

according to Regulation (EC) No. 453/210

Version 2016.1 Revision Date 27.06.2016

Print date 27.06.2016

GENERIC EU MSDS – NO COUNTRY SPECIFIC DATA – NO OEL DATA

8. Exposure controls/personal protection

Technical measures

Make sure eye washes and safety showers are near the work place,
Work under local exhaust/ventilation
High vapor concentration: gas mask with filter B or ABEKPE2

Exposure limit value

CHLORINE DIOXIDE, solution

TLV-TWA : mg/m³ 0.1 ppm

TLV-STEL : mg/m³ 0.3 ppm

TLV-Ceiling : mg/m³ ppm

WEL-LTEL : 0.28 mg/m³ 0.1 ppm

WEL-STEL : 0.84 mg/m³ 0.3 ppm

TRGS 900 : 0.28 mg/m³ 0.1 ppm

MAK : 0.28 mg/m³ 0.1 ppm

MAC-TGG 8 h : mg/m³

MAC-TGG 15 min. : 0.3 mg/m³

MAC-Ceiling : mg/m³

VME-8 h : 0.3 mg/m³ 0.1 ppm

VLE-15 min. : 0.8 mg/m³ 0.3 ppm

GWBB-8 h : 0.28 mg/m³ 0.1 ppm

GWK-15 min. : 0.84 mg/m³ 0.3 ppm

Momentary value : mg/m³ ppm

EC : mg/m³ ppm

EC-STEL : mg/m³ ppm

These will be added as they become available.

Occupational Hygiene

When you are working do not eat, drink or smoke. Wear personal protective equipment.

Mouth-nose protection

Required on not enough ventilated work areas.
Respiratory protection (Combination Filter Type B or ABEKPE2).

Skin and body



Wear suitable protective clothing (overall, preferably thick cotton or disposable protective clothing), gloves and eye/face protection.
Chemical-resistant shoes. Take off immediately all contaminated clothing. Store working clothes separate.

Hands



GIVE GOOD RESISTANCE:

Butyl rubber

Neoprene

PVC

- Breakthrough time: > 480 min

Do not wear thin disposable gloves

Eyes



Wear full face shield if splashing is possible. Safety glasses and face shield. Use an eye shower and/or rinse your eyes

**9. Physical and chemical properties**

Physical state	Liquid
Colour	Yellow
Odour	Irritating / pungent
pH	1.87 (100%, concentrate, 20°C).
Boiling point	No data available
Flash Point	N/A
Upper Limit	N/A
Lower Limit	N/A
Vapour Pressure	No data available
Relative density	± 1,04
Solubility in water	Fully
Viscosity	n.a.
Vapour Density	n.a.
Evaporation Rate	--

10. Stability and reactivity

Stability	Stable under normal temperature and pressures Store away from heat/moisture and metals
Conditions to avoid	Keep frost-free, avoid high temperatures and direct sunlight
Hazardous reactions	On burning formation of small quantities of hydrogen chloride
Hazardous decomposition products	On burning formation of small quantities of hydrogen chloride Thermal decomposition generates: chlorine dioxide, chlorates
Conditions to avoid	<ul style="list-style-type: none">• Temperature not exceeding 50°C• Store away from heat/moisture
Storage together with other substances	Acids, Organic compounds, Combustibles, oil reducing agents



EOX[®] eOxide[®] LQ85

eOX[®]

Aqueous Solution ClO₂ 0,85%

SAFETY DATA SHEET

according to Regulation (EC) No. 453/210

Version 2016.1 Revision Date 27.06.2016

Print date 27.06.2016

GENERIC EU MSDS – NO COUNTRY SPECIFIC DATA – NO OEL DATA

11. Toxicological information

Acute toxicity:

The following reviews of health hazards is based on an assessment of the component(s) of the product

Acute Toxicity

Rat oral LD50 (mg/kg)	292 mg/kg
Rabbit dermal LD50 (mg/kg)	N.D.
Rabbit dermal LD50	Moderate irritant to skin
Rat inhalation LC50	500 ppm/15 min. Note: This refer to ppm in air NOT in solution
Chronic toxicity Ingestion	N.D.
Carcinogenicity	Not listed in carcinogenicity class (IRAC, EC, TLV, MAK)
Tetratogenicity	Not listed in mutagenicity class (EC,MAK) Not classified as toxic to reproduction (EC)

12. Ecological information

Ecotoxicity	LC 50 Fathead minnow adult 0.17 mg/l/96 hrs LC 50 Bluegill young of the year 0.15 mg/l/96 hrs.
Mobility	N.A.
Effect on waste water purification	N.A.
Volatile organic compounds (VOC)	Soluble in water, for other physicochemical properties see heading 9
Persistence and degradability	
biodegradation BOD5	N.A.
water	No data available
soil	N.D.
Bioaccumulative potential	
log Pow	N.A.
BCF	N.D.
Results of PBT assessment	Not applicable, based on available data
Other adverse effects	WGK 1 Not dangerous for the ozone layer (Council Regulation (EC) No 2037/2000 O.J. L244



EOX[®] eOxide[®] LQ85

eOX[®]

Aqueous Solution ClO₂ 0,85%

SAFETY DATA SHEET

according to Regulation (EC) No. 453/210

Version 2016.1 Revision Date 27.06.2016

Print date 27.06.2016

GENERIC EU MSDS – NO COUNTRY SPECIFIC DATA – NO OEL DATA

13. Disposal considerations

Waste Information	Waste material code (91/689/EEC, Council Decision 2001/118/EC O.J. L47 LWCA : KGA category 01 (the Netherlands) Hazardous waste (91/689/EEC)
	Removing of residues Removal as waste according to local and national prescriptions Polluted Packaging Removal as waste according to local and national prescriptions
Treatment of dirty packaging	After last use, the packaging should be totally empty and closed. The used packing is only suitable for the packing of this product. When the packing is consigned, it should be brought back by the supplier.
Waste code according HG 856/2002	For this product a waste code number in accordance with the European waste catalogue cannot be granted, since only the intended user makes classification possible. The waste code number should be assigned in consultation with the local disposal. Removal as waste according to local and national prescriptions



EOX[®] eOxide[®] LQ85

eOX[®]

Aqueous Solution ClO₂ 0,85%

SAFETY DATA SHEET

according to Regulation (EC) No. 453/210

Version 2016.1 Revision Date 27.06.2016

Print date 27.06.2016

GENERIC EU MSDS – NO COUNTRY SPECIFIC DATA – NO OEL DATA

14. Transport information

Classification as ADR material for road transport

UN number

Not applicable – shipment Forbidden

ADR class

Proper shipping name

Packing Group

ADR label

Classification as INDG material for sea transport

UN number

Not applicable – shipment Forbidden

Proper shipping name

Packing Group

ADR label

EmS:

Marine pollutant



EOX[®] eOxide[®] LQ85

eOX[®]

Aqueous Solution ClO₂ 0,85%

SAFETY DATA SHEET

according to Regulation (EC) No. 453/210

Version 2016.1 Revision Date 27.06.2016

Print date 27.06.2016

GENERIC EU MSDS – NO COUNTRY SPECIFIC DATA – NO OEL DATA

15. Regulation

15.1 WGK Class

No data

15.2 Chemical Safety Assessment:

No data.

15.3 regulatory lists searched:

- 01=EU. Directive 76/769/EEC: Restrictions on the marketing and use of certain dangerous substances.
- 02=EU. Directive 90/394/EEC: Carcinogens at work.
- 03=EU. Directive 92/85/EEC: Pregnant or breastfeeding workers
- 04= EU. Directive 96/82/EC (Seveso II) : Article 9
- 05= EU. Directive 96/82/EC (Seveso II) : Articles 6 and 7
- 06= EU. Directive 98/24/EC : Chemical agents at work
- 07= EU. Directive 2004/37/EC : On the protection of workers.
- 08= EU. Regulation EC No. 689/2008 : Annex 1, Part 1.
- 09= EU. Regulation EC No. 689/2008 : Annex 1, Part 2.
- 10= EU. Regulation EC No. 689/2008 : Annex 1, Part 3.
- 11= EU. Regulation EC No. 850/2004 : Prohibiting and restricting persistent organic pollutants (POPs).
- 12= EU. REACH, Annex XVII: Restrictions on manufacture, placing on the market and use of certain dangerous Substances, mixture & article.
- 13= EU. REACH, Annex XIV: Candidate List of Substances of Very High Concern for Authorization (SVHC).

16. Other information

16.1 List of relevant R- and H- phrases from section 2 and 3 :

H314 Causes severe skin burns and eye damage.
H319 Causes serious eye irritation.
H331 Toxic if inhaled.
H400 Very toxic to aquatic life.

16.2 Abbreviations used in this document:

Nr.	Number
CAS	Chemical Abstracts Service
EINECS	European Inventory of Existing Commercial chemical Substances
WGK	Water Danger Class
ADR	Accord europeen relative au transport international des marchandises Dangereuses par Route
TLV	Threshold Limit Value
PTB	Persistent, toxisch, bioaccumulerend
CLP	Classification, Labeling and Packaging of chemicals



EOX[®] eOxide[®] LQ85

eOX[®]

Aqueous Solution ClO₂ 0,85%

SAFETY DATA SHEET

according to Regulation (EC) No. 453/210

Version 2016.1 Revision Date 27.06.2016

Print date 27.06.2016

GENERIC EU MSDS – NO COUNTRY SPECIFIC DATA – NO OEL DATA

Information Sources:

This information is based on the current available data (producers of raw materials, ECHA, Chemistry maps, ...)

All information contained in this safety data sheet is to the best of our knowledge and in accordance with the latest knowledge and understanding. Our company cannot guarantee that the information in the safety data sheet is completely accurate and complete. The provision of this safety data sheet from liability to the user of this product may not be able to assess the safety, health and environmental advice for their particular situation and application. It is an obligation for the user to use this product with care and the applicable legal provisions. The information in the safety data sheet shall be held by us in good faith and to our best knowledge and belief.

Explicit or implicit guarantee is not given.

Safety data sheet in accordance with Regulation (EU) nr. 453/2010 of the European Parliament and of the Council of 18 December 2006 on the assessment and authorization and restriction of chemicals (REACH)