



EU Material Safety Data Sheet

According to Directive 1907/2006/EG, Article 31

Printout: 07.12.2010

Doc. 16460 Rev. 1 / 10.09.2010

Trade name: BRIGON O₂ Measuring liquid

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

Identification of the product

Trade name: BRIGON O₂ measuring liquid
 Chemical composition: Chromium chloride and Zinc chloride in acidic aqueous solution with octanol as antifoam
 Recommended application: in mechanical measuring equipment for flue gas analysis to determine/calculate O₂ concentration in flue gas
 Company details: BRIGON Messtechnik GmbH
 Kronberger Street 11, 63110 Rodgau, Germany
 Tel.: +49-(0)6106-8207-0
 Fax: +49-(0)6106-8207-40
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 Emergency telephone: Poison emergency centre Mainz
 Langenbeck St. 1, 55131 Mainz
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2. Hazards identification

Hazard description:



C Corrosive

Other human health and environmental effects:

The product is subject to obligatory labelling according to TRGS 200 in the most recent version.

Risk Phrases:

R 21/22 Harmful in contact with skin and if swallowed.
 R 26 Very toxic by inhalation.
 R 34 Causes burns.
 R 43 May cause sensitisation by skin contact.
 R 52/53 Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment
 R 63 Possible risk of harm to the unborn child

3. Composition / Information on ingredients

Description: Chromium chloride and Zinc chloride in acidic aqueous solution with octanol as antifoam

Dangerous substances:

CAS: 10025-73-7	Chromium chloride	 C;  Xn; R 21/22-26-34-43-52/53-63
EINECS: 233-038-3		

Additional information:

For the wording of the listed risk phrases refer to section 16.

4. First aid measures

General information: By accident or unwell get qualified medical attention immediately.
After eye contact: Rinse opened eye for several minutes under running water if necessary up to 15 minutes, get qualified medical attention.
After skin contact: Wash with soap and water and rinse thoroughly. Immediately remove any clothing soiled with the product. Immediate medical treatment necessary, as untreated caustic burns prevent wounds from healing.

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After swallowing: Rinse out mouth and drink plenty of water. Consult medical personnel immediately. Do not induce vomiting.

After inhalation: Remove person from exposure, supply fresh air. Get qualified medical attention.

* 5. Fire fighting measures

Extinguishing media: Appropriate to other materials involved in and/or to the surrounding conditions. Keep containers cool with water. Water must not get into the containers.

Special exposure hazards arising from the substance or preparation itself, combustion products, resulting gases: None, the product is not combustible. May give off hydrogen chloride (HCl) under condition of extreme heat.

Protective equipment: wear self contained breathing apparatus if necessary. Avoid skin contact by wearing an appropriate protective clothing and keeping safe distance.

Additional information: Avoid contact with metals to prevent formation of explosive gases (hydrogen, hydrogen chloride). Collect contaminated fire fighting water separately. It must not penetrate the sewage system, surface water or ground water.

* 6. Accidental release measures

Personal precautions: Wear protective clothing. Keep unprotected persons away from the working area. Avoid skin and eye contact, do not inhale fumes/gases. Particular danger of slipping on leaked/spilled product. Secure fresh air supply in closed room.

Environmental precautions: Prevent from penetrating sewage/surface water/ground water. Prevent from penetrating the ground/soil. In case of spillage or penetration of sewage/ground waters contact local authorities.

Methods for cleaning up: Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust). Dispose of contaminated material as waste according to item 13. Secure sufficient fresh air supply.

* 7. Handling and storage

Handling:

Precautions for safe handling: Open and handle container with care. Spilled substance causes danger of slipping. Avoid skin and eye contact. Prevent aerosol formation. Ensure good ventilation of working area.

Fire and explosion precautions: The product is not combustible.

Storage:

Conditions for safe storage: Use only containers, specially approved for the product. Keep containers tightly closed. Store in cool, dry and well-ventilated conditions. Observe mandatory requirements of the local water law.

Information on incompatible materials or storage conditions: Do not store together with foodstuff or acids. Isolate from other chemicals.

Additional information on storage conditions: Keep contained sealed. Protect from frost and extreme heat. Life period of the product given on the label is applicable only in correct storage conditions for sealed containers.

* 8. Exposure controls/ personal protection equipment

Information on design of technical facilities: No further data; see item 7

Occupational exposure limits: Not applicable.

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Personal protection equipment:

General protective and hygienic measures: Immediately remove all soiled and contaminated clothing. Do not inhale gases/fumes/aerosols. Avoid eye and skin contact. Wash hands before breaks and at the end of work. Keep away from foodstuff, beverages and feed. Do not eat, drink, smoke or sniff while working.

Respiratory protection: Use suitable respiratory protective device when aerosol, mist or fume is formed or in case of insufficient ventilation, for example Particle filter P2.

Hands protection: Wear alkaline resistant gloves. The gloves material must be impermeable and resistant to the product/the substance/the preparation.

Gloves material: Appropriate gloves are to be selected not only out of material quality reasons, but also reviewing other quality characteristics, which vary from manufacturer to manufacturer. As the product contains several chemical substances, resistance of the gloves material can not be pre-estimated and must be tested before application. Recommended material natural rubber (latex)

Penetration time of gloves material: The exact penetration time for gloves material must be provided by the manufacturer.

Eyes protection: Sealed safety goggles and face mask.

Body protection: Alkaline resistant protective clothing

9. Physical and chemical properties

General information:

Form:	fluid
Colour:	dark blue
Odour:	odour of octanol

pH-value (20° C):	< 1
Boiling point:	no data available
Flash point:	no data available
Freezing point:	no data available
Flammability:	not applicable
Explosive properties:	not applicable
Solubility in water:	complete
Vapour density:	no data available
Viscosity:	no data available

* 10. Stability and Reactivity

Conditions to avoid: Stable under storage conditions given in item 7. Avoid exposure to high temperatures.

Materials to avoid: Oxidisers, acids, metal powders, nitrates, chlorates, carbides, alkalis.

Hazardous reactions: Toxic fumes may be produced with oxidisers, organics and strong acids. Reacts violently or explosively with metal powders, nitrates, chlorates, carbides and alkalis.

Hazardous decomposition products: Hydrogen chloride in the event of fire.

* 11. Toxicology

Acute toxicity: No data available

Primary irritation effects:

on skin: strong irritation of skin and mucosas

on eye: strong irritation

Sensibilization: no sensitising effects known.

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Additional toxicological information: Caustic. By ingestion may cause irritation of alimentary tract. Ingestion in quantity may cause haematemesis, oesophageal and gastric perforation. Inhalation of fumes or mist may cause damage to upper respiratory tract, teeth or lungs.

* 12. Ecological Information

Ecotoxicity: Harmful to aquatic organisms, may cause long term adverse effects in the aquatic environment.

Persistence and degradability: Inorganic product; can not be eliminated from water by biological cleaning process.

General information: Do not allow to penetrate ground water or sewage.

* 13. Disposal

Product:

Recommendation:

Must not be disposed together with household waste. Do not dispose into a sewage system. To be disposed in accordance with local environmental regulations. Contact the manufacturer for recycling information.

European waste catalogue:

Waste code numbers classification (EWC) according to EAK Directive must be applied for specified industrial branches and processes.

Contaminated packaging:

Recommendation:

Contaminated packaging is to be emptied thoroughly. They may be recycled after the proper cleaning. Otherwise contaminated containers must be disposed of as hazardous waste.

14. Transport information

Road transport (ADR/RID):

ADR/RID class: 8 corrosive substances

Kemler code: 80

UN number: 3264

Packaging group: III

Classification code: C1

Hazard label: 8

Limited quantity: LQ 19

Proper shipping name: CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S. (Chromium chloride and Zinc chloride in acidic aqueous solution)



Maritime transport (IMDG):

IMDG class: 8

UN number: 3264

Label: 8

Packaging group: III

EmS number: F-A, S-B

Marine pollutant: no

Proper shipping name: CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S. (Chromium chloride and Zinc chloride in aqueous solution)



Air transport (ICAO-TI/IATA-DGR)

ICAO/IATA class: 8

UN number: 3264

Packaging group: III

Label: 8



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Proper shipping name: Corrosive liquid, acidic, inorganic, n.o.s.
(Chromium chloride and Zinc chloride
in aqueous solution)

* 15. Regulatory information

Labelling according to the EU Directives:

The product is classified and labelled according to the EU Directives/Hazardous Substances Ordinance.

Label, code and hazard identification of the product:



C Corrosive

Hazard classifying components for labelling: Chromous chloride and Zinc chloride

Risk phrases:

R 21/22: Harmful in contact with skin and if swallowed.
R 26: Very toxic by inhalation
R 34: Causes burns
R43: May cause sensibilization by skin contact.
R52/53: Harmful to aquatic organisms, may cause long term adverse effects in the aquatic environment.
R 63: Possible risk of harm to the unborn child.

Safety phrases:

S 23: Do not breath vapour.
S 26: In case of eye contact, rinse immediately with water and seek medical advice.
S 36/37/39: Wear suitable protective clothing, gloves and eye/face protection.
S 45: In case of accident or unwell, seek medical advice immediately.
S 61: Avoid release into the environment. Refer to special instructions/safety data sheets.

National regulations:

Water hazard class: 2 (self assessment) hazardous to waters (according to German regulation VwVwS)

* 16. Other information

The above information is to be the best of our present knowledge. However it implies no representations or warranties for the product, including without limitation any warranties of merchantability, fitness for a particular purpose with respect to the information set forth herein and constitutes no legally valid contractual relationship. Therefore BRIGON Messtechnik will not be responsible for claims or damage resulting from handling, use, transport, storage or disposal of the product. This MSDS can be used for a.m. product only. If the substance is used as a component for other products, this MSDS might become invalid.

Relevant R-phrases:

The(se) R-phrases are those of the ingredient(s) and do(es) not represent the classification of the preparation and/or the product in the application concentration.

21/22 Harmful in contact with skin and if swallowed.
26 Very toxic by inhalation.
34 Causes burns.
43 May cause sensibilization by skin contact.
52/53 Harmful to aquatic organisms, may cause long term adverse effects in the aquatic environment.
63 Possible risk of harm to the unborn child.

Contact: Sales

* Revised information