



Safety Data Sheet
(according to 1907/2006/EC)
JLS-DUO Legionella Protection
Activated solution

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Issued on: 30.07.09
Last altered: 10.11.10
Order no.: 1702267

1 Identification of substance

Chemicals for water treatment disinfection created by use of JLS-DUO components 1 & 2 (order no.: 868008, 8680007, 8680006)

Trade name: JLS-DUO Legionella protection, activated solution

Supplier/manufacturer:

JUDO Wasseraufbereitung GmbH
Hohreuschstr. 39 - 41, 71364 Winnenden / Germany
Phone: 0049(0)7195/692-0
Information issued by: Industrial Water Technology Dept.
email: peter.mueller@judo-eu

Emergency information: Service phone, Munich 0049(0)89/19240

2 Possible hazards

Chlorine dioxide gas may be released when refilling containers. Product should always be mixed in the same container it is used in. Containers should always be stored and transported in an upright position.

3 Composition/information on ingredients

Chemical characteristics : 0.3% liquid chlorine dioxide

Description: Legionella protection

Mixture of compounds and additives as described herein and which are subject to labelling requirements of GefStoffY.

CAS no.	EINECS no.	Description	weight %
10049-04-4	233-162-8	chlorine dioxide	< 0.3%

4 First aid measures

General measures: Remove injured person from the danger area and lay flat.
If breathed in: Remove injured person into fresh air and lay flat. Keep warm and quiet. Call doctor immediately.
Upon skin contact: Wash immediately with soap & water and rinse well. Remove all clothing & shoes which have been in contact with the solution. If skin irritation persists, call doctor.
Upon eye contact: Hold eyelids open and rinse under flowing water for several minutes, then consult doctor immediately.
If swallowed: Rinse mouth out well and drink plenty of water. Do not induce vomiting! Consult a doctor immediately.

Self protection of the first aider: Mind self protection of first aider.

Doctor's information: Where chlorine dioxide, aerosols or spray has been breathed in: treat prophylactically as pulmonary oedema After eye contact: Treat as acid burn. If swallowed: gastric lavage and treat as acid burn or haemoglobins.

5 Fire fighting measures

Extinguishing agents: The product itself is non-flammable. Use extinguishing agent suitable for local environment.

Extinguishing agents to be avoided for safety reasons: solid extinguishing agents, carbon dioxide

Hazards relating to the product itself or its manufacture, its flammability or gas properties: In case of



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fire or over-heating, chlorine dioxide, chlorine and oxygen may be formed. Heating in an enclosed chamber may lead to an increase in pressure – danger of bursting! At temperatures in excess of 150 °C, oxygen which may be contusive to fires.

Protective equipment: wear self contained protective respirator and protective clothing.

Further details: Heating the container will result in an increase in pressure and danger of bursting or explosion. Spray heated container with water. Contaminated cooling water must be collected separately and may not be fed to the drain. Fire residue and extinguishing water must be disposed of in accordance with local regulations.

6 Accidental release measures

Personal safety measures: wear protective clothing (eyewear, gloves, respirator) and ensure unprotected persons are kept away from the contaminated area. All persons not required on site should clear the contaminated area immediately.

Environmental protection measures: Do not allow to flow into drains/ ground water / surface water. Do not allow to seep into earth-

Cleaning/collection process: Do not allow to dry. Collect in absorbent medium (sand, infusorial earth, universal binder).

Additional notes: Never return leaked material to the container for re-use (danger of decomposition).

7 Handling and storage

Handling:

Keep container closed at all times. Protect from heat & direct sunlight. Ensure good ventilation at place of use. Avoid contact with skin or eyes. Protect product from impurities. Do not re-use spilt product.

Notes on fire and explosion protection:

Never allow larger quantities of product to dry. Where dried, residue is to be removed using water. Do not use near acids, reducing agents, sulphurous materials and any flammable materials such as wood, paper, straw, textiles, oils, fats, rubber, dirt, etc.

Storage: Container must always be transported and stored in an upright position. Store in containers suitable for use with the product only. Ensure that all containers have adequate ventilation. Ensure containers are kept firmly closed and are stored in a cool and well ventilated environment.

Suitable containers: austenitic steel, PVC, PE, PP, polytetrafluorethylene, glass, ceramics.

Storage requirements: Do not store together with acids, reducing agents, metallic salts, flammable materials.

8 Exposure limitation and personal protection equipment

As per monitored values relevant to the workplace:

EG no. 233-162-8 chlorine dioxide MAK: 0.3 mg/m³ => 0.1 ml/m³

Personal protective equipment:

Respiratory protection: Where maximum permitted levels are exceeded, use respirators with grey, type B filters.

Protection for hands: Protective gloves made of PVC, Neoprene or nitrile rubber should be used. Avoid the use of gloves made of leather or wool.

Eye protection: tight fitting protective goggles

Skin protection: Wear protective clothing made of PVC, Neoprene or nitrile rubber. Boots made of rubber or plastic. Avoid the use of protective footwear made of leather.

General protection and hygiene measure:

The minimal requirements for safety standards when working with such materials are given in the TRGS 500. Do not eat, drink, smoke or sneeze when working directly with such substances. Clothing covered or soaked in such materials should be removed immediately. Hands should be washed thoroughly during breaks and at the close of work. Additional skin protection may be obtained by using hand creams. Avoid the formation of aerosols or mists.



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9 Physical & chemical properties

Aggregate state:	liquid
Colour:	yellow
Odour:	chlorine
PH value at 20 °C:	approx. 7
Melting point/ melting range:	approx. 0 °C
Boiling point / boiling range:	approx. 100 °C
Decomposition point:	180 °C
Flash point:	substance is inorganic
Spontaneous ignition point:	The substance is not subject to spontaneous ignition.
Explosion risk:	The substance is not subject to an explosion risk.
Relative density:	1 g/ml
Solubility /miscibility in water is unlimited.	

10 Product stability & reactivity

Thermal decomposition / measure to be avoided: danger of container exploding when substance is heated.

Substances to be avoided: metallic ions, metallic salts, reducing agents, inflammable substances.

Substances which may cause decomposition: chlorine dioxide (poisonous gas). May lead to over-pressurisation and container burst where decomposition occurs in containers and pipe work.

Further details: Do not allow product to dry out. Where dried on lightly inflammable materials (wood, paper, textiles) the risk of inflammation is increased.

11 Toxicological information

Acutely toxic: works as blood gas

Primary irritation effects:

On skin: irritable

On eyes: irritable

Allergisation: No allergisation effects known.

General notes: Classification was made according to calculations based according to guide lines 1999/45/EG

12 Environmental information

Environmental impact information:

Aquatic toxicity:

Type of test	Substance concentration	Method	Values
Brachydanio rerio	> 500 mg/l	LC ₅₀ (96 h)	

13 Notes for correct disposal

Product:

Disposal in accordance with regulations valid at point of use. Suggested waste classification key as per EAKV: 061301 inorganic pesticides, biocides and timber preservatives. Recommended disposal form: 1kg. Sulfurous IV acid, sodium slats for the neutralisation of 111 litres of product.

Packaging:

Suggested waste classification key for the choice of packaging materials as per EAKC 15 01 10: Packaging for substances with hazardous waste residue or which are contaminated by same.



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14 Notes on transportation

Classified as hazardous goods as stipulated in transport regulations

Land transport: In Germany: ADR/RID and GGVS/GGVE (internat./nat.):
ADR/RID class: 6.1 poisonous substances
Packaging group: II
UN no. & description: 3287 poisonous, liquid inorganic substance containing chlorine dioxide in solution.
GGVSE class: 6.1 Sea or air transport is not permitted for substances containing chlorine dioxide in solution.
Further transport notes: Do not transport together with acids or foodstuffs. All containers used must be well ventilated.

15 Regulatory information

Labelling

This product does not require specialised labelling under the terms of the EU-Listings or any other regulation known to us. All safety measures commonly required when handling chemical substances should be adhered to here.

R phrase: -

S phrase: 01 Keep securely closed
12 Containers must be ventilated
15 Protect from heat
24 Avoid contact with hands
25 Avoid contact with eyes
29 Do not feed to waste water system
36 Wear protective clothing at the work place
39 Wear protective eyewear
49 Store in original container only.

National regulations (Germany)

Water hazardous classification WGK 1 (low hazard risk) as per VwVwS, appendix 4

Biocide registration requirements

Product must be reported as biocide material in accordance with biocide hazard reporting requirements under the registration number **N-26751**

16 Further information

This information reflects the current knowledge available to us at this point in time. It does not indicate actual product properties and does not form any part of a contractual obligation.

Date sheet composed by: Works safety department
Contact: Mr. P. Müller