 Wasser- Aufbereitung	Safety Data Sheet (according to 1907/2006/EC) JLS-DUO Legionella Protection Component 2	page 1 of 5 Issued on: 17.02.03 Last altered: 18.04.07 Order no.: 1702269
--	---	--

1 Materials / Preparation and company description

Type of product: Legionella protection
Trade name: JLS-DUO Component 2
Order no.: 8680001, 8680002, 8680003
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 dangers

Type of danger:



Xn: health hazard,
O: oxidising

Notes on special hazards for persons and environment:

R 8: Fire hazard in connection with inflammable materials.
 R 22 Health risk when swallowed.
 R 36/37/38 Causes irritation to eyes, lungs and skin.
 R 42/43: Allergisation possible by inhalation and skin contact.

3 Composition / information on components

Materials posing health hazards: Mixture of compounds and additives as described herein and which are not subject to labelling requirements of GefStoffY.


CAS no.	EINECS no.	Description	Weight %	Code letter	R (risk) and S (security) phrases
7775-27-1	231-892-1	sodium peroxide sulphate <chem>Na2O8S2</chem>	> 50 %	Xn, O	R- 8, 22, 36/37/38, 42/43 S- 22, 24, 26, 37, 45

4 First aid measures

General measures: Remove all clothing in contact with substance immediately. Remove injured persons from the contaminated area and lay flat. Never attempt to induce material into the mouth of an unconscious person.
If breathed in: Ensure a supply of fresh air or oxygen and contact doctor immediately. If unconscious, transport and lay in the recovery position.
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.

5 Fire fighting measures

Extinguishing agents: CO₂, extinguishing powder or water spray. Larger blazes are to be extinguished using

 Wasser- Aufbereitung	Safety Data Sheet (according to 1907/2006/EC) JLS-DUO Legionella Protection Component 2	page 2 of 5 Issued on: 17.02.03 Last altered: 18.04.07 Order no.: 1702269
--	---	--

water spray or alcohol resistant foam.

Extinguishing agents to be avoided for safety reasons: Do not hose directly!

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

Poisonous gases may develop during a fire. Keep closed containers near the blaze cool using water spray.

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

Further details: 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: Ensure adequate ventilation. Avoid dust formation. Do not breath dust in. Use respirators where danger of fumes, dust, aerosols is present. Ensure adequate ventilation. Avoid skin and eye contact. 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. Where seepage occurs, contact local authorities immediately.

Cleaning/collection process: Dispose of waste as per section 13. Ensure good ventilation. Material to be disposed of is to be collected mechanically avoiding dust creation wherever possible. Dispose of using suitable containers. Residue to be washed away using large volumes of water. Keep waste away from inflammable or incompatible materials.

7 Handling and storage

Handling:

Keep container closed at all times. Avoid dust creation. Ensure good ventilation at place of use. Avoid contact with skin or eyes. Do not breath in gases/fumes/aerosols/smoke.

Notes on fire and explosion protection:

The product itself is non-flammable, can, however, cause ignition to other inflammable materials. It possesses inflammable properties (release of oxygen) especially when exposed to heat and damp. Avoid dust creation.

Storage:

Storage and container requirements:

Store in firmly closed containers in a cool and dry environment. Never add residual volumes back into the container- risk of decomposition. Do not store near inflammable materials. Use only containers specifically recommended for this substance. Observe all local regulations governing the storage of substances with low water contamination properties. All electronic equipment used in conjunction with this product must conform to the local safety standards required. Storage temperature < 30 °C.

Storage compatibility requirements: As per local regulations at point of use.

Further instructions: Keep containers firmly closed at all times.

8 Exposure limitation and personal protection equipment


As per monitored values relevant to the workplace: This product does not contain substances at levels requiring monitoring at the workplace.

Additional notes:

The basis were the lists valid at the point of creation.

Personal protective equipment:

General protection and hygiene measure: The general safety precautions required when working with chemicals are to be adhered to at all times. Do not allow contact with foodstuffs. Soiled or soaked clothing should be removed immediately. Wash hands thoroughly during breaks and after work. Do not inhale dust/smoke /fumes.

 Wasser- Aufbereitung	Safety Data Sheet (according to 1907/2006/EC) JLS-DUO Legionella Protection Component 2	page 3 of 5 Issued on: 17.02.03 Last altered: 18.04.07 Order no.: 1702269
--	---	--

Respiratory protection: Where exposure is short, inhalation protective masks are sufficient. Where exposure is over a longer period or where ventilation is insufficient, use respirators.

Protection for hands: suitable protective gloves

Eye protection: protective goggles

Skin Protection: Wear protective clothing.

9 Physical & chemical properties

Aggregate state:	solid	
Colour:	white	
Odour:	odourless	
PH value (at 100 g/l H ₂ O) 20 °C	3.5 - 3.8	
Melting point/ melting range:	not applicable	
Boiling point / boiling range:	not applicable	
Flash point:	not applicable	
Ignition temperature:	not applicable	
Decomposition temperature:	≈ 180 °C	
Spontaneous ignition point:	The substance is not subject to spontaneous ignition.	
Explosion risk:	The substance is not subject to an explosion risk.	
Density:	2.4 g/cm ³	
Bulk density:	≈ 1150 kg/m ³	
Solubility /miscibility in water	20 °C	545 g/l
	60 °C	680 g/l

10 Product stability & reactivity

Thermal decomposition / measure to be avoided:

Thermal decomposition approx. 180 °C (Method SADT, UN-TEST H.4). Noticeable decomposition at temperatures >60 °C (in form as delivered). Self generating decomposition possible as of temperatures as of approx. 180 °C. Keep away from heat and fire risk. Protect from damp. Keep away from inflammable and incompatible materials and avoid contamination (e.g. rust, ash, dust).

Substances to be avoided: reaction with contaminants: catalysts, strong acid or alkaline materials, heavy metals (salts), reducing agents, contaminants such as rust, dust, ash – danger of decomposition.

Risk of dangerous reactions:

stability: stable whilst under storage conditions as given here. Exposure to even small amounts of damp or contaminants may noticeably reduce the self generated decomposition process.

Dangers due to decomposition by-products:

In cases of fire or high temperature development dangerous or poisonous gases may be formed.

11 Toxicological information

Acutely toxic:

Relevant classification LD/LC-50 values:

oral	LD 50	920 mg/kg (rat)
dermal	LD 50	> 10.000 mg/kg (rabbit)
on inhalation	LC 50 /4h	> 5.1 mg/l (rat)


Primary irritation effects:

On skin: irritable skin and mucous

On eyes: irritable

Allergisation: allergisation test

Sub-acute to chronic taxability: AMES test: results: Does not effect DNA in AMES test.

 Wasser- Aufbereitung	Safety Data Sheet (according to 1907/2006/EC) JLS-DUO Legionella Protection Component 2	page 4 of 5 Issued on: 17.02.03 Last altered: 18.04.07 Order no.: 1702269
--	---	--

12 Environmental information

Environmental impact information:

Hydrolysis (decomposition) occurs in water. Products; sodium ions oxygen, sulphates.

Aquatic toxicity:

Fisch	EC 50 /96 h	Dosis: 163 mg/l
Bakterien	EC 50 /72 h	Dosis: 116 mg/l
aquatische Invertebraten	EC 50 / Daphnie / 48 h	Dosis: 133 mg/l

General notes:

Water hazardous class 1 (classification listings):low level water hazard.

Do not allow to seep into ground water, surface water or public drainage system undiluted or in large quantities.

13 Notes for correct disposal

Product: May not be disposed of together with household refuse. Do not feed to public drainage system. Must be disposed of in accordance with the hazardous waste regulations valid at point and time of use.

Suggested waste classification key: 51540

Description: Other soluble salts

May require disposal in underground or specialised depots. Please consult local regulations.

Packaging:

According to local regulations.

Cleaning agents recommended:

Water with the addition of cleaning agents where required.

14 Notes on transportation

Description of product: 1505 sodium persulfate

In Germany: ADR/RID and GGVS/GGVE (internat./nat.):ADR/RID-GGVS/E class (other countries please check local regulations):




ADR/RID-GGVS/E class:	5.1 inflammable (oxidising) materials
UN no.:	1505
Packaging group:	III
Hazard label no.	5.1
Hazard class no.	50
Description of goods:	1505 sodium persulfate

Sea transport IMDG /GGVsee:



IMDG/GGVSee class:	5.1
UN no.:	1505
Packaging group:	III
Label	5.1
EmS no.:	F-A, S-Q
Correct technical name:	SODIUM PERSULFATE

 Wasser- Aufbereitung	Safety Data Sheet (according to 1907/2006/EC) JLS-DUO Legionella Protection Component 2	page 5 of 5 Issued on: 17.02.03 Last altered: 18.04.07 Order no.: 1702269
--	---	--

Air transport ICAO-TI and IATA-DGR:



ICAO /IATA class:	5.1
UN/ID no.:	1505
Label	5.1
Packaging group:	III
Correct technical name:	SODIUM PERSULFATE

15 Regulatory information

This product does is categorised and labelled in accordance with GeffStoffY.

Code letter and hazard description for this product:



Xn Health hazard
O Oxydising

Source of hazard requiring labelling: sodium persulfate

R phrases (risks):

- 8: Fire hazard when in contact with flammable materials.
- 22: Health hazard when swallowed.
- 23: Do not inhale gas/smoke/fumes/aerosol.
- 36/37/39: Irritates eyes, airways and skin.
- 42/43: Inhalation and skin contact may lead to allergic reaction.

S phrases (safety):

- 22: Do not inhale dust.
- 24: Avoid skin contact.
- 26: Following contact with eyes, rinse well and consult a doctor immediately.
- 36/37/39: Wear adequate protective clothing, gloves and eyewear at place of work (if possible, show this data sheet).
- 45: Immediately call a doctor in case of an accident or illness (if possible, show this data sheet).

National regulations (Germany):

Observe all regulations covered under maternity protection laws. Other countries, please consult local regulations governing health & safety for expectant mothers at the workplace.

Failure regulation: Appendix I

Classification corresponding VbF: not applicable
 Water hazardous class 1 (classification listings): low level water hazard

Further regulations: Observe regulations as per TRGS 540, TRGS 515.

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 obligating.

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