

Safety data sheet
according to 1907/2006/EC, Article 31

Revision: 27.06.2012

Printing date 01.07.2013

SECTION 1: Identification of the substance/mixture and of the company/undertaking**1.1 Product identifier**

Trade name

Glutaraldehyde, 25% aq. soln.

Stock number:

A17876, L14351

1.2 Relevant identified uses of the substance or mixture and uses advised against.

Identified use:

SU24 Scientific research and development

1.3 Details of the supplier of the safety data sheet

Manufacturer/Supplier:

Alfa Aesar GmbH & Co.KG
A Johnson Matthey Company
Zeppelinstr. 7b
76185 Karlsruhe / Germany
Tel: +49 (0) 721 84007 280
Fax: +49 (0) 721 84007 300
Email: tech@alfa.com
www.alfa.com
Product safety Tel + +049 (0) 7275 988687-0
Carechem 24: +44 (0) 1235 239 670 (Multi-language emergency number)
Poison Information Center Mainz
www.giftinfo.uni-mainz.de Telephone: +49(0)6131/19240

Informing department:

1.4 Emergency telephone number:**SECTION 2: Hazards identification****2.1 Classification of the substance or mixture**

Classification according to Regulation (EC) No 1272/2008



GHS08 health hazard

Resp. Sens. 1 H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.



GHS05 corrosion

Skin Corr. 1B H314 Causes severe skin burns and eye damage.



GHS09 environment

Aquatic Acute 1 H400 Very toxic to aquatic life.



GHS07

Acute Tox. 4 H302 Harmful if swallowed.

Acute Tox. 4 H332 Harmful if inhaled.

Skin Sens. 1 H317 May cause an allergic skin reaction.

STOT SE 3 H335-H336 May cause respiratory irritation. May cause drowsiness or dizziness.

Classification according to Directive 67/548/EEC or Directive 1999/45/EC

T; Toxic

R23: Toxic by inhalation.



C; Corrosive

R34: Causes burns.



Xn; Harmful

R22: Harmful if swallowed.



Xn; Sensitising

R42/43: May cause sensitisation by inhalation and skin contact.



Xi; Irritant

R37: Irritating to respiratory system.

Information concerning particular hazards for human and environment:

The product has to be labelled due to the calculation procedure of the "General Classification guideline for preparations of the EU" in the latest valid version.

Other hazards that do not result in classification

No information known.

2.2 Label elements**Labelling according to Regulation (EC) No 1272/2008**

Hazard pictograms

Signal word

Hazard-determining components of labelling:

Hazard statements

The product is classified and labelled according to the CLP regulation.

GHS05, GHS07, GHS08, GHS09

Danger

Glutaraldehyde

H302 Harmful if swallowed.

H332 Harmful if inhaled.

H314 Causes severe skin burns and eye damage.

H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.

H317 May cause an allergic skin reaction.

H335-H336 May cause respiratory irritation. May cause drowsiness or dizziness.

H400 Very toxic to aquatic life.

P260 Do not breathe dust/fume/gas/mist/vapours/spray.

P285 In case of inadequate ventilation wear respiratory protection.

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.

P405 Store locked up.

P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

Precautionary statements**2.3 Other hazards****Results of PBT and vPvB assessment**

PBT:

Not applicable.

vPvB:

Not applicable.

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SECTION 3: Composition/information on ingredients**3.2 Mixtures****Dangerous components:**

CAS: 111-30-8 EINECS: 203-856-5	Glutaraldehyde T R23/25; C R34; Xn R42/43; N R50 Acute Tox. 3, H301; Acute Tox. 3, H331; Resp. Sens. 1, H334; Skin Corr. 1B, H314; Aquatic Acute 1, H400; Skin Sens. 1, H317	25,0%
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Additional information None known.**Non-Hazardous Ingredients**

CAS: 7732-18-5 EINECS: 231-791-2	Water	75,0%
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SECTION 4: First aid measures**4.1 Description of first aid measures****General information**

Instantly remove any clothing soiled by the product.
Remove breathing apparatus only after soiled clothing has been completely removed.
In case of irregular breathing or respiratory arrest provide artificial respiration.

After inhalation

Supply fresh air. If required, provide artificial respiration. Keep patient warm. Consult doctor if symptoms persist.

After skin contact

Seek immediate medical advice.
Instantly wash with water and soap and rinse thoroughly.

After eye contact

Seek immediate medical advice.
Rinse opened eye for several minutes under running water. Then consult doctor.

After swallowing

Seek medical treatment.

4.2 Most important symptoms and effects, both acute and delayed

No further relevant information available.

4.3 Indication of any immediate medical attention and special treatment needed

No further relevant information available.

SECTION 5: Firefighting measures**5.1 Extinguishing media****Suitable extinguishing agents**

CO₂, extinguishing powder or water jet. Fight larger fires with water jet or alcohol-resistant foam.

5.2 Special hazards arising from the substance or mixture

If this product is involved in a fire, the following can be released:
Carbon monoxide and carbon dioxide

5.3 Advice for firefighters**Protective equipment:**

Wear self-contained breathing apparatus.
Wear full protective suit.

SECTION 6: Accidental release measures**6.1 Personal precautions, protective equipment and emergency procedures**

Wear protective equipment. Keep unprotected persons away.
Ensure adequate ventilation

6.2 Environmental precautions:

Do not allow material to be released to the environment without proper governmental permits.
Do not allow product to reach sewage system or water bodies.
Do not allow to enter the ground/soil.

6.3 Methods and material for containment and cleaning up:

Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
Use neutralizing agent.

Prevention of secondary hazards:

Dispose of contaminated material as waste according to item 13.
Ensure adequate ventilation.

6.4 Reference to other sections

No special measures required.
See Section 7 for information on safe handling
See section 8 for information on personal protection equipment.
See Section 13 for information on disposal.

SECTION 7: Handling and storage**7.1 Precautions for safe handling**

Keep containers tightly sealed.
Ensure good ventilation/exhaustion at the workplace.
Open and handle container with care.

Information about protection against explosions and fires:

No information known.

7.2 Conditions for safe storage, including any incompatibilities**Storage Requirements to be met by storerooms and containers:**

Refrigerate

Information about storage in one common storage facility:

Protect from heat.
Store away from oxidizing agents.

Further information about storage conditions:

Keep container tightly sealed.
Store in a locked cabinet or with access restricted to technical experts or their assistants.

7.3 Specific end use(s)

Refrigerate
No further relevant information available.

SECTION 8: Exposure controls/personal protection**Additional information about design of technical systems:**

Properly operating chemical fume hood designed for hazardous chemicals and having an average face velocity of at least 100 feet per minute.

8.1 Control parameters**Components with critical values that require monitoring at the workplace:****111-30-8 Glutaraldehyde (25,0%)**

AGW (Germany)	0,2 mg/m ³ , 0,05 ppm 2(l):AGS, Sah, Y
MAK (TRGS 900) (Germany)	0,42 mg/m ³ , 0,1 ppm Y; DFG
REL (USA)	Short-term value: C 0,8 mg/m ³ , C 0,2 ppm See Pocket Guide App. C
TLV (USA)	Short-term value: C 0,2 mg/m ³ , C 0,05 ppm SEN;activated or inactivated

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Additional information:	No data	(Contd. of page 2)
8.2 Exposure controls	The usual precautionary measures should be adhered to in handling the chemicals. Keep away from foodstuffs, beverages and food. Instantly remove any soiled and impregnated garments. Wash hands during breaks and at the end of the work. Store protective clothing separately. Avoid contact with the eyes and skin. Maintain an ergonomically appropriate working environment. Use self-contained respiratory protective device in emergency situations. Check protective gloves prior to each use for their proper condition. The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. Impervious gloves Not determined Tightly sealed safety glasses. Full face protection Protective work clothing.	
Personal protective equipment		
General protective and hygienic measures		
Breathing equipment:		
Protection of hands:		
Material of gloves		
Penetration time of glove material		
Eye protection:		
Body protection:		

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties		
General Information		
Appearance:		
Form:	Liquid	
Colour:	Colourless	
Smell:	Not determined	
Odour threshold:	Not determined.	
pH-value:	Not determined.	
Change in condition		
Melting point/Melting range:	Not determined	
Boiling point/Boiling range:	Not determined	
Sublimation temperature / start:	Not determined.	
Inflammability (solid, gaseous)	Not determined.	
Ignition temperature:	Not determined.	
Decomposition temperature:	Not determined	
Self-inflammability:	Product is not selfigniting.	
Critical values for explosion:		
Lower:	Not determined	
Upper:	Not determined	
Steam pressure at 20 °C:	23 hPa	
Density at 20 °C	1,062 g/cm³	
Relative density	Not determined.	
Vapour density	Not determined.	
Evaporation rate	Not determined.	
Solubility in / Miscibility with		
Water:	Fully miscible	
Partition coefficient (n-octanol/water):	Not determined.	
Viscosity:		
dynamic:	Not determined.	
kinematic:	Not determined.	
Solvent content:		
Organic solvents:	0,0 %	
9.2 Other information	No further relevant information available.	

SECTION 10: Stability and reactivity

10.1 Reactivity	No information known.
10.2 Chemical stability	Stable under recommended storage conditions.
Thermal decomposition / conditions to be avoided:	No decomposition if used and stored according to specifications.
10.3 Possibility of hazardous reactions	Reacts with strong oxidizing agents
10.5 Incompatible materials:	Oxidizing agents
	Heat
10.6 Hazardous decomposition products:	Carbon monoxide and carbon dioxide

SECTION 11: Toxicological information

11.1 Information on toxicological effects		
Acute toxicity:	Harmful if swallowed. Fatal if inhaled. Swallowing will lead to a strong caustic effect on mouth and throat and to the danger of perforation of esophagus and stomach. The Registry of Toxic Effects of Chemical Substances (RTECS) contains acute toxicity data for components in this product.	
LD/LC50 values that are relevant for classification:	No data	
Skin irritation or corrosion:	Causes severe skin burns.	
Eye irritation or corrosion:	Causes serious eye damage.	
Sensitization:	May cause allergy or asthma symptoms or breathing difficulties if inhaled. May cause an allergic skin reaction. The Registry of Toxic Effects of Chemical Substances (RTECS) contains mutation data for components in this product.	
Germ cell mutagenicity:	ACGIH A4: Not classifiable as a human carcinogen: Inadequate data on which to classify the agent in terms of its carcinogenicity in humans and/or animals.	
Carcinogenicity:	The Registry of Toxic Effects of Chemical Substances (RTECS) contains tumorigenic and/or carcinogenic and/or neoplastic data for this product. The Registry of Toxic Effects of Chemical Substances (RTECS) contains reproductive data for components in this product.	
Reproductive toxicity:		
Specific target organ system toxicity - repeated exposure:	No effects known.	
Specific target organ system toxicity - single exposure:	May cause respiratory irritation.	
Aspiration hazard:	No effects known.	
Experience with humans:	The Registry of Toxic Effects of Chemical Substances (RTECS) contains multiple dose toxicity data for components in this product.	

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Trade name **Glutaraldehyde, 25% aq. soln.****Additional toxicological information:**

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To the best of our knowledge the acute and chronic toxicity of this substance is not fully known.
The product shows the following dangers according to the calculation method of the General EC Classification Guidelines for Preparations as issued in the latest version:
Toxic
Harmful
Corrosive
Irritant

SECTION 12: Ecological information**12.1 Toxicity****Aquatic toxicity:**

No further relevant information available.

12.2 Persistence and degradability

No further relevant information available.

12.3 Bioaccumulative potential

No further relevant information available.

12.4 Mobility in soil

No further relevant information available.

Additional ecological information:**General notes:**

Do not allow material to be released to the environment without proper governmental permits.
Water danger class 3 (Self-assessment): extremely hazardous for water.
Do not allow product to reach ground water, water bodies or sewage system, even in small quantities.
Danger to drinking water if even extremely small quantities leak into soil.
Avoid transfer into the environment.

12.5 Results of PBT and vPvB assessment**PBT:**

Not applicable.

vPvB:

Not applicable.

12.6 Other adverse effects

No further relevant information available.

SECTION 13: Disposal considerations**13.1 Waste treatment methods****Recommendation**

Hand over to disposers of hazardous waste.
Must be specially treated under adherence to official regulations.
Consult state, local or national regulations for proper disposal.

Uncleaned packagings:**Recommendation:**

Disposal must be made according to official regulations.

Recommended cleaning agent:

Water, if necessary with cleaning agent.

SECTION 14: Transport information**UN-Number****ADR, IMDG, IATA**

UN2922

14.2 UN proper shipping name**ADR****IMDG, IATA**

2922 CORROSIVE LIQUID, TOXIC, N.O.S. (Glutaraldehyde)
CORROSIVE LIQUID, TOXIC, N.O.S. (Glutaraldehyde)

14.3 Transport hazard class(es)**ADR****Class****Label****IMDG, IATA**

8 (CT1) Corrosive substances.
8+6.1

**Class****Label**

8 Corrosive substances.
8+6.1

Packing group**ADR, IMDG, IATA**

III

14.5 Environmental hazards:**Marine pollutant:**

No

14.6 Special precautions for user**Kemler Number:**

Warning: Corrosive substances.
86

14.7 Transport in bulk according to Annex II of MARPOL73/78 and the IBC**Code**

Not applicable.

Transport/Additional information:**ADR****Excepted quantities (EQ):**

E1

Limited quantities (LQ)

5L

Transport category

3

Tunnel restriction code

E

UN "Model Regulation":

UN2922, CORROSIVE LIQUID, TOXIC, N.O.S. (Glutaraldehyde), 8 (6.1), III

SECTION 15: Regulatory information**15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture****Australian Inventory of Chemical Substances**

All ingredients are listed.

Standard for the Uniform Scheduling of Drugs and Poisons

111-30-8 | Glutaraldehyde

S2, S5, S6

National regulations**Information about limitation of use:**

Employment restrictions concerning young persons must be observed.
For use only by technically qualified individuals.
Not applicable

Classification according to VbF:**Technical instructions (air):**

Class	Share in %
Wasser	75,0
I	25,0

Water hazard class:

Water danger class 3 (Self-assessment): extremely hazardous for water.

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Trade name Glutaraldehyde, 25% aq. soln.	
Other regulations, limitations and prohibitive regulations (Contd. of page 4)	
ELINCS (European List of Notified Chemical Substances)	
None of the ingredients is listed.	
Substances of very high concern (SVHC) according to REACH, Article 57	
None of the ingredients are listed.	
REACH - Pre-registered substances	
All ingredients are listed.	
15.2 Chemical safety assessment:	A Chemical Safety Assessment has not been carried out.

SECTION 16: Other information

Employers should use this information only as a supplement to other information gathered by them, and should make independent judgement of suitability of this information to ensure proper use and protect the health and safety of employees. This information is furnished without warranty, and any use of the product not in conformance with this Material Safety Data Sheet, or in combination with any other product or process, is the responsibility of the user.

Relevant phrases

H301 Toxic if swallowed.
H314 Causes severe skin burns and eye damage.
H317 May cause an allergic skin reaction.
H331 Toxic if inhaled.
H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H400 Very toxic to aquatic life.

R23/25 Toxic by inhalation and if swallowed.
R34 Causes burns.
R42/43 May cause sensitisation by inhalation and skin contact.
R50 Very toxic to aquatic organisms.

Department issuing data specification sheet:**Abbreviations and acronyms:**

Health, Safety and Environmental Department.
ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
IMDG: International Maritime Code for Dangerous Goods
IATA: International Air Transport Association
GHS: Globally Harmonized System of Classification and Labelling of Chemicals
VbF: Verordnung über brennbare Flüssigkeiten, Österreich (Ordinance on the storage of combustible liquids, Austria)
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent

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