

**Safety Data Sheet (SDS)**

OSHA HazCom Standard 29 CFR 1910.1200(g) and GHS Rev 03.

Reviewed on 09/25/18



Issue date 06/11/15

### \* 1 Identification

- **Product identifier**
- **Trade name: Glutaraldehyde**
- **Relevant identified uses of the substance or mixture and uses advised against**  
No further relevant information available.
- **Product description** Glutaraldehyde 20% in water
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**  
Dermatologic Lab & Supply, Inc.  
608 13th Ave.  
Council Bluffs, IA USA 51501-6401  
Voice: (800) 831-6273 or (712) 323-3269  
Fax: (800) 320-9612 or (712) 323-1156  
www.delasco.com
- **Emergency telephone number:** Chemtrec 800-424-9300

\*

- **Classification of the substance or mixture**



GHS06 Skull and crossbones

Acute Tox. 3 H331 Toxic if inhaled.



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.

Eye Dam. 1 H318 Causes serious eye damage.



GHS07

Acute Tox. 4 H302 Harmful if swallowed.

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

H227 Combustible liquid.

Flam. Liq. 4 · **Label elements**

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- **GHS label elements**

The product is classified and labeled according to the Globally Harmonized System (GHS).

- **Hazard pictograms**



GHS05 GHS06 GHS08

- **Signal word** Danger

- **Hazard-determining components of labeling:**

Glutaral

- **Hazard statements**

Combustible liquid.

Harmful if swallowed.

Toxic if inhaled.

Causes severe skin burns and eye damage.

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

May cause an allergic skin reaction.

- **Precautionary statements**

Keep away from flames and hot surfaces. – No smoking.

Do not breathe dusts or mists.

Wear respiratory protection.

Avoid breathing dust/fume/gas/mist/vapors/spray.

Use only outdoors or in a well-ventilated area.

Wear protective gloves / eye protection / face protection.

Wear protective gloves.

Wear eye protection / face protection.

Wash thoroughly after handling.

Do not eat, drink or smoke when using this product.

Contaminated work clothing must not be allowed out of the workplace.

IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.

If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do.

Continue rinsing.

Immediately call a poison center/doctor.

If swallowed: Call a poison center/doctor if you feel unwell.

Specific treatment (see supplementary first aid instructions on this Safety Data Sheet).

If experiencing respiratory symptoms: Call a poison center/doctor.

IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.

Wash contaminated clothing before reuse.

If inhaled: If breathing is difficult, remove person to fresh air and keep comfortable for breathing.

If skin irritation or rash occurs: Get medical advice/attention.

If swallowed: Rinse mouth. Do NOT induce vomiting.

In case of fire: Use for extinction: CO<sub>2</sub>, powder or water spray.

If on skin: Wash with plenty of water.

Store locked up.

Store in a well-ventilated place. Keep container tightly closed.

Store in a well-ventilated place. Keep cool.

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

- **Classification system:** NFPA/HMIS Definitions: 0-Least, 1-Slight, 2-Moderate, 3-High, 4-Extreme

- **NFPA ratings (scale 0 - 4)**

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**Trade name: Glutaraldehyde**



Health = 3  
Fire = 2  
Reactivity = 0

· **HMIS-ratings (scale 0 - 4)**



Health = \*3  
Fire = 2  
Reactivity = 0

· **Hazard(s) not otherwise classified (HNOC):** None known

## \* 3 Composition/information on ingredients

7732-18-5	Water, distilled water, deionized water	70-90%
<ul style="list-style-type: none"> <li>· <b>Chemical characterization: Substance</b></li> <li>· <b>Identification number(s)</b></li> <li>· <b>EC number:</b> 201-207-0</li> <li>· <b>Index number:</b> 607-066-00-5</li> <li>· <b>Description:</b> Mixture of substances listed below with nonhazardous additions.</li> </ul>		
<ul style="list-style-type: none"> <li>· <b>Dangerous Components:</b></li> </ul>		
CAS: 111-30-8 RTECS: MA 2450000	Glutaral 	15-35%

## \* 4 First-aid measures

- **Description of first aid measures**
- **General information:**  
Immediately remove any clothing soiled by the product.  
Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.
- **After inhalation:**  
In case of unconsciousness, place patient securely on side position for transportation.  
Remove to fresh air. If not breathing, give artificial respiration or give oxygen by trained personnel. Get immediate medical attention.
- **After skin contact:**  
Immediately wash with water and soap and rinse thoroughly. If skin irritation occurs, consult a doctor.
- **After eye contact:** Hold eyelids apart and flush eyes with plenty of water for at least 15 minutes. Get medical attention.
- **After swallowing:**  
Do not induce vomiting without medical advice. Drink copious amounts of water and provide fresh air. Immediately call a doctor.
- **Information for doctor:**
- **Most important symptoms and effects, both acute and delayed:** No further relevant information available.
- **Indication of any immediate medical attention and special treatment needed**  
No further relevant information available.

## \* 5 Fire-fighting measures

- **Extinguishing media**

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- **Suitable extinguishing agents:** CO<sub>2</sub>, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- **Special hazards arising from the substance or mixture**  
Combustible liquid. Vapors can travel to a source of ignition and flash back.  
Explosive mixtures may occur at temperatures at or above flashpoint.
- **Advice for firefighters** Use water spray to cool unopened containers.
- **Protective equipment:**  
Mouth respiratory protective device.  
As in any fire, wear self-contained breathing apparatus pressure-demand (NIOSH approved or equivalent), and full protective gear to prevent contact with skin and eyes.

### \* 6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures**  
Ensure adequate ventilation  
Avoid contact with skin, eyes and clothing.  
Keep people at a distance and stay upwind.  
Keep away from ignition sources Do not inhale gases / fumes / aerosols Treat any fumes as toxic. Wear protective equipment. Keep unprotected persons away.
- **Environmental precautions:**  
Dilute with plenty of water. Do not allow to enter sewers/ surface or ground water.
- **Methods and material for containment and cleaning up:**  
Absorb with liquid-binding material (i.e. sand, diatomite, acid binders, universal binders, sawdust).  
Use neutralizing agent.  
Dispose contaminated material as waste according to section 13.  
Ensure adequate ventilation. Dispose of the collected material according to regulations.
- **Reference to other sections**  
See Section 7 for information on safe handling.  
See Section 8 for information on personal protection equipment.  
See Section 13 for disposal information.

### \* 7 Handling and storage

- **Handling:**
- **Precautions for safe handling**  
Keep away from heat and direct sunlight.  
Avoid contact with skin, eyes and clothing  
Ensure good ventilation/exhaustion at the workplace.  
Prevent formation of aerosols.
- **Information about protection against explosions and fires:** No special measures required.
- **Conditions for safe storage, including any incompatibilities** Store away from strong acids, strong bases and strong oxidizing agents.
- **Storage:**
- **Requirements to be met by storerooms and receptacles:** No special requirements.
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:** Keep receptacle tightly sealed.
- **Specific end use(s)** No further relevant information available.

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### \* 8 Exposure controls/personal protection

- **Additional information about design of technical systems:** No further data; see section 7.

- **Control parameters**

All ventilation should be designed in accordance with OSHA standard (29 CFR 1910.94). Use mechanical (general) ventilation for storage areas. Use appropriate ventilation as required to keep Exposure Limits in Air below TLV & PEL limits.

- **Components with occupational exposure limits:**

#### 111-30-8 Glutaral

REL	Ceiling limit value: 0.8 mg/m <sup>3</sup> , 0.2 ppm See Pocket Guide App. C
TLV	Ceiling limit value: 0.2 mg/m <sup>3</sup> , 0.05 ppm (SEN) NIC-DSEN;RSEN ;activated or inactivated

- **Additional information:** The lists that were valid during the creation of this SDS were used as basis.

- **Exposure controls**

- **Personal protective equipment:**

- **General protective and hygienic measures:**

The usual precautionary measures for handling chemicals should be followed.

Keep away from foodstuffs, beverages and feed.

Immediately remove all soiled and contaminated clothing and wash before reuse.

Wash hands before breaks and at the end of work.

Avoid contact with the eyes and skin.

- **Breathing equipment:**



Suitable respiratory protective device recommended.

- **Protection of hands:**



Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation. Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture. Select glove material based on penetration times, rates of diffusion and degradation.

- **Material of gloves**

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. As the product is a preparation of several substances, the resistance of the glove material cannot be calculated in advance and has therefore to be checked prior to the application.

- **Penetration time of glove material**

The exact break-through time has to be determined and observed by the manufacturer of the protective gloves.

- **Eye protection:**



Tightly sealed goggles

- **Body protection:**

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Trade name: **Glutaraldehyde**



Protective work clothing

### \* 9 Physical and chemical properties

· **Information on basic physical and chemical properties**

· **General Information · Appearance:**

- **Form:** Liquid
- **Color:** Clear, colorless to pale yellow
- **Odor:** Slightly pungent
- **Odor threshold:** Not determined.
- **pH-value:** 2.9

· **Change in condition**

- **Melting point/Melting range:** Not determined.
- **Boiling point/Boiling range:** 100 °C (212 °F)
- **Flash point:** 71 °C (160 °F)
- **Flammability (solid, gaseous):** Not applicable.

· **Ignition temperature:**

- **Decomposition temperature:** Not determined.
- **Auto igniting:** Product is not self-igniting.
- **Danger of explosion:** Not determined.

· **Explosion limits:**

- **Lower:** 0.0 Vol %
- **Upper:** 0.0 Vol %
- **Vapor pressure @ 20 °C (68 °F):** 23 hPa (17 mm Hg)

- **Density @ 20 °C (68 °F):** 1.01 g/cm<sup>3</sup> (8.428 lbs/gal)

- **Relative density** Not determined.

- **Vapor 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 %
- **Water:** 80.0 %
- **Other information** No further relevant information available.

### \* 10 Stability and reactivity

- **Reactivity** No further relevant information available.
- **Chemical stability** Stable under normal conditions.

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- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **Possibility of hazardous reactions** No dangerous reactions known.
- **Conditions to avoid** No further relevant information available.
- **Incompatible materials:** Strong bases, strong acids and strong oxidizing agents.
- **Hazardous decomposition products:** Carbon Oxides.

### \* 11 Toxicological information

- **Information on toxicological effects**
- **Acute toxicity:**

- **LD/LC50 values that are relevant for classification:**

#### 111-30-8 Glutaral

Oral	LD50	134 mg/kg (rat)
Dermal	LD50	2560 mg/kg (rabbit)
Inhalative	LC50/4 h	0.48 mg/l (rat)

- **Primary irritant effect:**
- **on the skin:**  
Corrosive effect on skin and mucous membranes.  
Corrosive to skin and mucous membranes. Emmissions from broken bulbs may cause an allergic skin reaction.
- **on the eye:**  
Corrosive effect. Causes serious eye irritation.
- **Sensitization:**  
Sensitization possible through inhalation.  
Sensitization possible through skin contact.

#### **Additional toxicological information:**

The product shows the following dangers according to internally approved calculation methods for preparations: Harmful  
Corrosive  
Irritant  
Swallowing will lead to a corrosive effect on mouth and throat and to the danger of perforation of esophagus and stomach.

- **Carcinogenic categories**
- **IARC (International Agency for Research on Cancer)**  
Group 1 - Carcinogenic to humans  
Group 2A - Probably carcinogenic to humans  
Group 2B - Possibly carcinogenic to humans  
Group 3 - Not classifiable as to its carcinogenicity to humans  
Group 4 - Probably not carcinogenic to humans

None of the ingredients are listed.

- **NTP (National Toxicology Program)** Substance is not listed.

None of the ingredients are listed.

- **OSHA-Ca (Occupational Safety & Health Administration)**

None of the ingredients are listed.

### \* 12 Ecological information

- **Toxicity**

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· <b>Aquatic toxicity:</b>	
<b>111-30-8 Glutaral</b>	
EC50	0.61 mg/l (Green algae) 0.75 mg/l (Water flea)

· **Persistence and degradability** No further relevant information available. ·

**Behavior in environmental systems:**

· **Bioaccumulative potential** No further relevant information available.

· **Mobility in soil** No further relevant information available. ·

**Additional ecological information:**

· **General notes:**

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

Do not allow product to reach ground water, water course or sewage system, even in small quantities.

Must not reach bodies of water or drainage ditch undiluted or unneutralized.

Danger to drinking water if even extremely small quantities leak into the ground.

· **Results of PBT and vPvB assessment**

· **PBT:** Not applicable.

· **vPvB:** Not applicable.

· **Other adverse effects** No further relevant information available.

### \* 13 Disposal considerations

· **Waste treatment methods** ·

**Recommendation:**

Observe all federal, state and local environmental regulations when disposing of this material.

Must not be disposed of together with household garbage. Do not allow product to reach sewage system.

· **Uncleaned packagings:**

· **Recommendation:** Disposal must be made according to official regulations.

· **Recommended cleansing agent:** Water, if necessary with cleansing agents.

### \* 14 Transport information

· **UN-Number**

· **DOT, ADR, IMDG, IATA**

UN2922

· **UN proper shipping name**

· **DOT, ADR**

UN2922 Corrosive liquids, toxic, n.o.s. (Glutaral)

· **IMDG, IATA**

CORROSIVE LIQUID, TOXIC, N.O.S. (Glutaral)

· **Transport hazard class(es)**

· **DOT**



· **Class**

8 Corrosive substances

· **Label**

8, 6.1



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· **ADR**



· **Class**

8 (CT1) Corrosive substances

· **Label**

8+6.1

· **IMDG**



· **Class**

8 Corrosive substances

· **Label**

8/6.1

· **IATA**



· **Class**

8 Corrosive substances

· **Label**

8 (6.1)

· **Packing group**

· **DOT, ADR, IMDG, IATA**

II

· **Environmental hazards:**

Not applicable.

· **Special precautions for user**

Warning: Corrosive substances

· **Danger code (Kemler):**

86

· **EMS Number:**

F-A,S-B

· **Segregation groups**

Acids

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

Not applicable.

· **Transport/Additional information:**

· **DOT**

· **Quantity limitations**

On passenger aircraft/rail: 1 L

On cargo aircraft only: 30 L

· **Remarks:**

Special marking with the symbol (fish and tree).

· **ADR**

· **Excepted quantities (EQ)**

Code: E2

Maximum net quantity per inner packaging: 30 ml

Maximum net quantity per outer packaging: 500 ml

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- **IMDG**

- **Limited quantities (LQ)** IATA/SHA HazCom Standard 29 CFR 1910.1200(g) and GHS Rev 03.

- **Excepted quantities (EQ)**

- Issue date 06/17/15

Code: E2

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Maximum net quantity per inner packaging: 30 ml

Maximum net quantity per outer packaging: 500 ml

UN2922, Corrosive liquids, toxic, n.o.s. (Glutaral), 8 (6.1), II

**Trade name: Glutaraldehyde**

- **UN "Model Regulation":**

### 15 Regulatory information

- **Safety, health and environmental regulations/legislation specific for the substance or mixture**

- **Sara**

- **Section 355 (extremely hazardous substances):**

None of the ingredients are listed.

- **Section 313 (Specific toxic chemical listings):**

None of the ingredients are listed.

- **TSCA (Toxic Substances Control Act):**

All ingredients are listed.

- **California Proposition 65**

- **Chemicals known to cause cancer:**

None of the ingredients are listed.

- **Chemicals known to cause reproductive toxicity for females:**

None of the ingredients are listed.

- **Chemicals known to cause reproductive toxicity for males:**

None of the ingredients are listed.

- **Chemicals known to cause developmental toxicity:**

None of the ingredients are listed.

- **Carcinogenic categories**

- **EPA (Environmental Protection Agency)**

None of the ingredients are listed.

- **TLV (Threshold Limit Value established by ACGIH)**

111-30-8 | Glutaral

A4

- **NIOSH-Ca (National Institute for Occupational Safety and Health)**

None of the ingredients are listed.

- **GHS label elements** The product is classified and labeled according to the Globally Harmonized System (GHS).

- **Hazard pictograms**



GHS05 GHS06 GHS08

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### Trade name: Glutaraldehyde

- **Signal word** Danger
- **Hazard-determining components of labeling:**  
Glutaral
- **Hazard statements**  
Combustible liquid.  
Harmful if swallowed.  
Toxic if inhaled.  
Causes severe skin burns and eye damage.  
May cause allergy or asthma symptoms or breathing difficulties if inhaled.  
May cause an allergic skin reaction.

#### **Precautionary statements**

- Keep away from flames and hot surfaces. – No smoking.
- Do not breathe dusts or mists.
- Wear respiratory protection.
- Avoid breathing dust/fume/gas/mist/vapors/spray.
- Use only outdoors or in a well-ventilated area.
- Wear protective gloves / eye protection / face protection.
- Wear protective gloves.
- Wear eye protection / face protection.
- Wash thoroughly after handling.
- Do not eat, drink or smoke when using this product.
- Contaminated work clothing must not be allowed out of the workplace.
- IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
- If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
- Immediately call a poison center/doctor.
- If swallowed: Call a poison center/doctor if you feel unwell.
- Specific treatment (see supplementary first aid instructions on this Safety Data Sheet).
- If experiencing respiratory symptoms: Call a poison center/doctor.
- IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
- Wash contaminated clothing before reuse.
- If inhaled: If breathing is difficult, remove person to fresh air and keep comfortable for breathing.
- If skin irritation or rash occurs: Get medical advice/attention.
- If swallowed: Rinse mouth. Do NOT induce vomiting.
- In case of fire: Use for extinction: CO<sub>2</sub>, powder or water spray.
- If on skin: Wash with plenty of water.
- Store locked up.
- Store in a well-ventilated place. Keep container tightly closed.
- Store in a well-ventilated place. Keep cool.
- Dispose of contents/container in accordance with local/regional/national/international regulations.

· <b>National regulations:</b>		
The product is subject to be classified according with the latest version of the regulations on hazardous substances.		
· <b>State Right to Know</b>		
CAS: 7732-18-5	Water, distilled water, deionized water	70-90%
CAS: 111-30-8 RTECS: MA 2450000	Glutaral  Acute Tox. 3, H301; Acute Tox. 3, H331;  Resp. Sens. 1, H334;  Skin Corr. 1B, H314;  Aquatic Acute 1, H400;  Skin Sens. 1, H317; Flam. Liq. 4, H227	15-35%

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All ingredients are listed.

- **Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

### 16 Other information

The information and recommendations in this safety data sheet are, to the best of our knowledge, accurate as of the date of issue. Nothing herein shall be deemed to create warranty, expressed or implied, and shall not establish a legally valid contractual relationship. It is the responsibility of the user to determine applicability of this information and the suitability of the material or product for any particular purpose.

- **Date of preparation / last revision**

06/11/15 - 09/25/18 /

- **Abbreviations and acronyms:**

ADR: The European Agreement concerning the International Carriage of Dangerous Goods by Road

ADN: The European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways

IMDG: International Maritime Code for Dangerous Goods

DOT: US Department of Transportation

IATA: International Air Transport Association

ACGIH: American Conference of Governmental Industrial Hygienists

EINECS: European Inventory of Existing Commercial Substances

ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

NFPA: National Fire Protection Association (USA)

HMIS: Hazardous Materials Identification System (USA)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

Flam. Liq. 4: Flammable liquids, Hazard Category 4

Acute Tox. 3: Acute toxicity, Hazard Category 3

Acute Tox. 4: Acute toxicity, Hazard Category 4

Skin Corr. 1B: Skin corrosion/irritation, Hazard Category 1B

Eye Dam. 1: Serious eye damage/eye irritation, Hazard Category 1

Resp. Sens. 1: Sensitisation - Respirat., Hazard Category 1

Skin Sens. 1: Sensitisation - Skin, Hazard Category 1

Aquatic Acute 1: Hazardous to the aquatic environment - AcuteHazard, Category 1

- **\* Data compared to the previous version altered.**

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