

### SECTION 1: Identification

#### 1.1. Identification

Product form : Mixture  
Trade name : Glutaraldehyde 25% EM Grade  
Product code : 00376

#### 1.2. Recommended use and restrictions on use

Recommended use : Use as laboratory reagent, Manufacture of substances

#### 1.3. Supplier

##### Manufacturer

Polysciences  
400 Valley Road  
Warrington, PA 18976 - United States  
T +1 215 343 6484 - F +1 215 343 0214  
[info@polysciences.com](mailto:info@polysciences.com) - [www.polysciences.com](http://www.polysciences.com)

#### 1.4. Emergency telephone number

Emergency number : 24-hour emergency phone number ChemTel 1-800-255-3924

### SECTION 2: Hazard(s) identification

#### 2.1. Classification of the substance or mixture

##### GHS US classification

Acute toxicity (oral) Category 4	Harmful if swallowed
Acute toxicity (inhalation) Category 4	Harmful if inhaled
Skin corrosion/irritation Category 1B	Causes severe skin burns and eye damage
Respiratory sensitization, Category 1	May cause an allergy or asthma symptoms or breathing difficulties if inhaled
Skin sensitization, Category 1	May cause an allergic skin reaction
Hazardous to the aquatic environment – Chronic Hazard Category 2	Toxic to aquatic life with long lasting effects

#### 2.2. GHS Label elements, including precautionary statements

##### GHS US labeling

Hazard pictograms (GHS US) :



Signal word (GHS US) :

: Danger

Hazard statements (GHS US) :

: Harmful if swallowed or if inhaled  
Causes severe skin burns and eye damage  
May cause an allergic skin reaction  
May cause an allergy or asthma symptoms or breathing difficulties if inhaled  
Toxic to aquatic life with long lasting effects

Precautionary statements (GHS US) :

: Do not breathe dust/fume/gas/mist/vapors/spray.  
Avoid breathing dust/fume/gas/mist/vapors/spray.  
Wash hands, forearms and face thoroughly after handling.  
Do not eat, drink or smoke when using this product.  
Use only outdoors or in a well-ventilated area.  
Contaminated work clothing must not be allowed out of the workplace.

#### 2.3. Other hazards which do not result in classification

No additional information available

#### 2.4. Unknown acute toxicity (GHS US)

Not applicable

### SECTION 3: Composition/Information on ingredients

#### 3.1. Substances

Not applicable

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### 3.2. Mixtures

Name	Product identifier	%	GHS US classification
Glutaraldehyde	(CAS-No.) 111-30-8		Met. Corr. 1, H290 Acute Tox. 3 (Oral), H301 Acute Tox. 4 (Dermal), H312 Acute Tox. 3 (Inhalation), H331 Acute Tox. 1 (Inhalation:vapour), H330 Skin Corr. 1B, H314 Eye Dam. 1, H318 Resp. Sens. 1, H334 Skin Sens. 1, H317 STOT SE 3, H335 Aquatic Acute 1, H400 Aquatic Chronic 2, H411
Water	(CAS-No.) 7732-18-5		Not classified

Full text of hazard classes and H-statements : see section 16

## SECTION 4: First-aid measures

### 4.1. Description of first aid measures

- First-aid measures general : Call a physician immediately.
- First-aid measures after inhalation : Remove person to fresh air and keep comfortable for breathing. Call a physician immediately.
- First-aid measures after skin contact : Rinse skin with water/shower. Remove/Take off immediately all contaminated clothing. Call a physician immediately.
- First-aid measures after eye contact : Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Call a physician immediately.
- First-aid measures after ingestion : Rinse mouth. Call a physician immediately. Do not induce vomiting.

### 4.2. Most important symptoms and effects (acute and delayed)

- Symptoms/effects after inhalation : May cause respiratory irritation. May cause an allergy or asthma symptoms or breathing difficulties if inhaled.
- Symptoms/effects after skin contact : Burns. May cause an allergic skin reaction.
- Symptoms/effects after eye contact : Serious damage to eyes.
- Symptoms/effects after ingestion : Burns.

### 4.3. Immediate medical attention and special treatment, if necessary

Treat symptomatically.

## SECTION 5: Fire-fighting measures

### 5.1. Suitable (and unsuitable) extinguishing media

- Suitable extinguishing media : Water spray. Dry powder. Foam. Carbon dioxide.

### 5.2. Specific hazards arising from the chemical

- Hazardous decomposition products in case of fire : Toxic fumes may be released.

### 5.3. Special protective equipment and precautions for fire-fighters

- Protection during firefighting : Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.

## SECTION 6: Accidental release measures

### 6.1. Personal precautions, protective equipment and emergency procedures

#### 6.1.1. For non-emergency personnel

- Emergency procedures : Ventilate spillage area. Do not breathe dust/fume/gas/mist/vapors/spray. Only qualified personnel equipped with suitable protective equipment may intervene.

#### 6.1.2. For emergency responders

- Protective equipment : Do not attempt to take action without suitable protective equipment. For further information refer to section 8: "Exposure controls/personal protection".

### 6.2. Environmental precautions

Avoid release to the environment.

### 6.3. Methods and material for containment and cleaning up

- For containment : Collect spillage.

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- Methods for cleaning up : Take up liquid spill into absorbent material.  
Other information : Dispose of materials or solid residues at an authorized site.

### 6.4. Reference to other sections

For further information refer to section 13.

## SECTION 7: Handling and storage

### 7.1. Precautions for safe handling

- Precautions for safe handling : Ensure good ventilation of the work station. Wear personal protective equipment. Use only outdoors or in a well-ventilated area. Do not breathe dust/fume/gas/mist/vapors/spray. Avoid contact with skin and eyes.
- Hygiene measures : Do not eat, drink or smoke when using this product. Always wash hands after handling the product. Wash contaminated clothing before reuse. Contaminated work clothing should not be allowed out of the workplace.

### 7.2. Conditions for safe storage, including any incompatibilities

- Storage conditions : Store in a well-ventilated place. Keep cool. Store at room temp. Store locked up.  
Incompatible materials : Metals.

## SECTION 8: Exposure controls/personal protection

### 8.1. Control parameters

<b>Glutaraldehyde 25% EM Grade</b>	
No additional information available	
<b>Glutaraldehyde (111-30-8)</b>	
<b>USA - ACGIH - Occupational Exposure Limits</b>	
Local name	Glutaraldehyde activated or inactivated
ACGIH Ceiling (ppm)	0.05 ppm (activated and inactivated)
Remark (ACGIH)	URT, skin, & eye irr; CNS impair
ACGIH chemical category	dermal sensitizer activated or unactivated, Not Classifiable as a Human Carcinogen activated and inactivated
Regulatory reference	ACGIH 2020
<b>USA - NIOSH - Occupational Exposure Limits</b>	
NIOSH REL (ceiling) (mg/m <sup>3</sup> )	0.8 mg/m <sup>3</sup>
NIOSH REL C [ppm]	0.2 ppm
<b>Water (7732-18-5)</b>	
No additional information available	

### 8.2. Appropriate engineering controls

- Appropriate engineering controls : Ensure good ventilation of the work station.  
Environmental exposure controls : Avoid release to the environment.

### 8.3. Individual protection measures/Personal protective equipment

#### Hand protection:

Protective gloves

#### Eye protection:

Safety glasses

#### Skin and body protection:

Wear suitable protective clothing

#### Respiratory protection:

In case of insufficient ventilation, wear suitable respiratory equipment. [In case of inadequate ventilation] wear respiratory protection.

**Personal protective equipment symbol(s):**

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### SECTION 9: Physical and chemical properties

#### 9.1. Information on basic physical and chemical properties

Physical state	: Liquid
Appearance	: clear, colorless, liquid.
Color	: Colorless
Odor	: Acrid
Odor threshold	: No data available
pH	: No data available
Melting point	: -21.1 °C
Freezing point	: No data available
Boiling point	: 100.6 °C
Flash point	: No data available
Relative evaporation rate (butyl acetate=1)	: No data available
Flammability (solid, gas)	: Not applicable.
Vapor pressure	: 0.2 mm Hg at 20°C
Relative vapor density at 20°C	: 1.1
Relative density	: 1.06
Solubility	: Water: 100 %
Partition coefficient n-octanol/water (Log Pow)	: No data available
Auto-ignition temperature	: No data available
Decomposition temperature	: No data available
Viscosity, kinematic	: No data available
Viscosity, dynamic	: No data available
Explosion limits	: No data available
Explosive properties	: No data available
Oxidizing properties	: No data available

#### 9.2. Other information

No additional information available

### SECTION 10: Stability and reactivity

#### 10.1. Reactivity

The product is non-reactive under normal conditions of use, storage and transport.

#### 10.2. Chemical stability

Stable under normal conditions.

#### 10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.

#### 10.4. Conditions to avoid

High heat and evaporation of water.

#### 10.5. Incompatible materials

Strong acids. Strong bases. metals.

#### 10.6. Hazardous decomposition products

Under normal conditions of storage and use, hazardous decomposition products should not be produced.

### SECTION 11: Toxicological information

#### 11.1. Information on toxicological effects

Acute toxicity (oral)	: Harmful if swallowed.
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Acute toxicity (dermal) : Not classified  
Acute toxicity (inhalation) : Harmful if inhaled.

Glutaraldehyde 25% EM Grade	
LD50 oral rat	2.3 ml/kg
LD50 dermal rabbit	2.54 ml/kg
ATE US (oral)	500 mg/kg body weight
ATE US (gases)	4500 ppmV/4h
ATE US (vapors)	11 mg/l/4h
ATE US (dust, mist)	1.5 mg/l/4h

Glutaraldehyde (111-30-8)	
LD50 oral rat	252 mg/kg
LD50 dermal rabbit	1800 mg/kg
LC50 Inhalation - Rat [ppm]	23.5 ppm/4h

Skin corrosion/irritation : Causes severe skin burns.  
Serious eye damage/irritation : Assumed to cause serious eye damage  
Respiratory or skin sensitization : May cause an allergy or asthma symptoms or breathing difficulties if inhaled. May cause an allergic skin reaction.  
Germ cell mutagenicity : Not classified  
Carcinogenicity : Not classified  
Reproductive toxicity : Not classified  
STOT-single exposure : Not classified

Glutaraldehyde (111-30-8)	
STOT-single exposure	May cause respiratory irritation.

STOT-repeated exposure : Not classified  
Aspiration hazard : Not classified  
Viscosity, kinematic : No data available  
Symptoms/effects after inhalation : May cause respiratory irritation. May cause an allergy or asthma symptoms or breathing difficulties if inhaled.  
Symptoms/effects after skin contact : Burns. May cause an allergic skin reaction.  
Symptoms/effects after eye contact : Serious damage to eyes.  
Symptoms/effects after ingestion : Burns.

## SECTION 12: Ecological information

### 12.1. Toxicity

Ecology - general : The product is not considered harmful to aquatic organisms or to cause long-term adverse effects in the environment. Very toxic to aquatic life. Toxic to aquatic life with long lasting effects.

Glutaraldehyde (111-30-8)	
LC50 fish 1	7.8 – 22 mg/l (Exposure time: 96 h - Species: Lepomis macrochirus [static])
EC50 Daphnia 1	14 mg/l (Exposure time: 48 h - Species: Daphnia magna)
LC50 fish 2	2.6 – 4.8 mg/l (Exposure time: 96 h - Species: Oncorhynchus mykiss [flow-through])
EC50 Daphnia 2	0.56 – 1.0 mg/l (Exposure time: 48 h - Species: Daphnia magna [Static])

### 12.2. Persistence and degradability

No additional information available

### 12.3. Bioaccumulative potential

Glutaraldehyde (111-30-8)	
Partition coefficient n-octanol/water (Log Pow)	0.22 (at 25 °C)

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### 12.4. Mobility in soil

No additional information available

### 12.5. Other adverse effects

No additional information available

## SECTION 13: Disposal considerations

### 13.1. Disposal methods

Waste treatment methods : Dispose of contents/container in accordance with licensed collector's sorting instructions.

## SECTION 14: Transport information

### Department of Transportation (DOT)

In accordance with DOT

Transport document description : UN3265 Corrosive liquid, acidic, organic, n.o.s., 8, III  
UN-No.(DOT) : UN3265  
Proper Shipping Name (DOT) : Corrosive liquid, acidic, organic, n.o.s.  
Class (DOT) : 8 - Class 8 - Corrosive material 49 CFR 173.136  
Packing group (DOT) : III - Minor Danger  
Hazard labels (DOT) : 8 - Corrosive



Dangerous for the environment : Yes  
Marine pollutant : Yes



DOT Packaging Non Bulk (49 CFR 173.xxx) : 203  
DOT Packaging Bulk (49 CFR 173.xxx) : 241  
DOT Special Provisions (49 CFR 172.102) : 386 - Notwithstanding the provisions of §177.834(l) of this subchapter, cargo heaters may be used when weather conditions are such that the freezing of a wetted explosive material is likely. Shipments must be made by private, leased or contract carrier vehicles under exclusive use of the offeror. Cargo heaters must be reverse refrigeration (heat pump) units. Shipments made in accordance with this Special provision are excepted from the requirements of §173.60(b)(4) of this subchapter.  
IB3 - Authorized IBCs: Metal (31A, 31B and 31N); Rigid plastics (31H1 and 31H2); Composite (31HZ1 and 31HA2, 31HB2, 31HN2, 31HD2 and 31HH2). Additional Requirement: Only liquids with a vapor pressure less than or equal to 110 kPa at 50 C (1.1 bar at 122 F), or 130 kPa at 55 C (1.3 bar at 131 F) are authorized, except for UN2672 (also see Special Provision IP8 in Table 2 for UN2672).  
T7 - 4 178.274(d)(2) Normal..... 178.275(d)(3)  
TP1 - The maximum degree of filling must not exceed the degree of filling determined by the following: Degree of filling =  $97 / 1 + a (tr - tf)$  Where: tr is the maximum mean bulk temperature during transport, and tf is the temperature in degrees celsius of the liquid during filling.  
TP28 - A portable tank having a minimum test pressure of 2.65 bar (265 kPa) may be used provided the calculated test pressure is 2.65 bar or less based on the MAWP of the hazardous material, as defined in 178.275 of this subchapter, where the test pressure is 1.5 times the MAWP.  
DOT Packaging Exceptions (49 CFR 173.xxx) : 154  
DOT Quantity Limitations Passenger aircraft/rail (49 CFR 173.27) : 5 L  
DOT Quantity Limitations Cargo aircraft only (49 CFR 175.75) : 60 L

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DOT Vessel Stowage Location	: A - The material may be stowed "on deck" or "under deck" on a cargo vessel and on a passenger vessel.
DOT Vessel Stowage Other	: 40 - Stow "clear of living quarters"
Emergency Response Guide (ERG) Number	: 153
Other information	: No supplementary information available.

### Transportation of Dangerous Goods

Not applicable

### Transport by sea

Transport document description (IMDG)	: UN 3265 CORROSIVE LIQUID, ACIDIC, ORGANIC, N.O.S., 8, III, MARINE POLLUTANT/ENVIRONMENTALLY HAZARDOUS
UN-No. (IMDG)	: 3265
Proper Shipping Name (IMDG)	: CORROSIVE LIQUID, ACIDIC, ORGANIC, N.O.S.
Class (IMDG)	: 8 - Corrosive substances
Packing group (IMDG)	: III - substances presenting low danger
Limited quantities (IMDG)	: 5 L
Marine pollutant	: Yes



### Air transport

Transport document description (IATA)	: UN 3265 Corrosive liquid, acidic, organic, n.o.s., 8, III, ENVIRONMENTALLY HAZARDOUS
UN-No. (IATA)	: 3265
Proper Shipping Name (IATA)	: Corrosive liquid, acidic, organic, n.o.s.
Class (IATA)	: 8 - Corrosives
Packing group (IATA)	: III - Low danger

## SECTION 15: Regulatory information

### 15.1. US Federal regulations

#### Glutaraldehyde (111-30-8)

Listed on the United States TSCA (Toxic Substances Control Act) inventory

#### Water (7732-18-5)

Listed on the United States TSCA (Toxic Substances Control Act) inventory

### 15.2. International regulations

#### CANADA

#### Glutaraldehyde (111-30-8)

Listed on the Canadian DSL (Domestic Substances List)

#### Water (7732-18-5)

Listed on the Canadian DSL (Domestic Substances List)

### EU-Regulations

#### National regulations

No additional information available

### 15.3. US State regulations

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Component	State or local regulations
Glutaraldehyde(111-30-8)	U.S. - Massachusetts - Right To Know List; U.S. - New Jersey - Right to Know Hazardous Substance List; U.S. - Pennsylvania - RTK (Right to Know) List

### SECTION 16: Other information

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Revision date : 11/18/2020

#### Hazard Rating

Health : 3 Serious Hazard - Major injury likely unless prompt action is taken and medical treatment is given

Flammability : 1 Slight Hazard - Materials that must be preheated before ignition will occur. Includes liquids, solids and semi solids having a flash point above 200 F. (Class IIIB)

Physical : 0 Minimal Hazard - Materials that are normally stable, even under fire conditions, and will NOT react with water, polymerize, decompose, condense, or self-react. Non-Explosives.

SDS US (GHS HazCom 2012)

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