

## Glutaraldehyde solution, 25% w/w, For Electron Microscopy

Version number: GHS 1.0

Date of compilation: 2024-06-26

### SECTION 1: Identification of the substance/mixture and of the company/undertaking

#### 1.1 Product identifier

Identification of the substance	<b>Glutaraldehyde solution, 25% w/w, For Electron Microscopy</b>
CAS number	111-30-8
Alternative number(s)	RM5927

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

Relevant identified uses	Laboratory chemicals, Manufacture of substances
Uses advised against	Do not use for squirting or spraying. Do not use for products which come into direct contact with the skin.

#### 1.3 Details of the supplier of the safety data sheet

HiMedia Laboratories Pvt. Ltd.  
Plot No. C40, Road No. 21Y, Wagle Industrial Area, MIDC  
Thane West Maharashtra 400604  
India

Telephone: +91 22 69034800, +91 22 61169797  
e-mail: info@himedialabs.com  
Website: www.himedialabs.com

e-mail (competent person) info@himedialabs.com (HiMedia Laboratories Pvt. Ltd)

#### 1.4 Emergency telephone number

Emergency information service +91 9321269711

### SECTION 2: Hazards identification

#### 2.1 Classification of the substance or mixture

Classification acc. to GHS

Section	Hazard class	Category	Hazard class and category	Hazard statement
3.1O	acute toxicity (oral)	3	Acute Tox. 3	H301
3.1I	acute toxicity (inhal.)	2	Acute Tox. 2	H330
3.2	skin corrosion/irritation	1B	Skin Corr. 1B	H314
3.4R	respiratory sensitisation	1	Resp. Sens. 1	H334
3.4S	skin sensitisation	1A	Skin Sens. 1A	H317
3.8R	specific target organ toxicity - single exposure (respiratory tract irritation)	3	STOT SE 3	H335
4.1A	hazardous to the aquatic environment - acute hazard	1	Aquatic Acute 1	H400
4.1C	hazardous to the aquatic environment - chronic hazard	2	Aquatic Chronic 2	H411

For full text of abbreviations: see SECTION 16.

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The most important adverse physicochemical, human health and environmental effects

Skin corrosion produces an irreversible damage to the skin; namely, visible necrosis through the epidermis and into the dermis. Spillage and fire water can cause pollution of watercourses.

### 2.2 Label elements

Labelling

- Signal word danger

- Pictograms

GHS05, GHS06,  
GHS08, GHS09



- Hazard statements

H301	Toxic if swallowed.
H314	Causes severe skin burns and eye damage.
H317	May cause an allergic skin reaction.
H330	Fatal if inhaled.
H334	May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H410	Very toxic to aquatic life with long lasting effects.

- Precautionary statements

P260	Do not breathe dust/fume/gas/mist/vapours/spray.
P280	Wear protective gloves/protective clothing/eye protection/face protection/hearing protection.
P301+P310	IF SWALLOWED: Immediately call a POISON CENTER/doctor.
P303+P361+P353	IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower.
P304+P340	IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P403+P233	Store in a well-ventilated place. Keep container tightly closed.

- Supplemental hazard information

EUH071	Corrosive to the respiratory tract.
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### 2.3 Other hazards

Results of PBT and vPvB assessment

According to the results of its assessment, this substance is not a PBT or a vPvB.

Endocrine disrupting properties

Does not contain an endocrine disruptor (ED) at a concentration of  $\geq 0,1\%$ .

## SECTION 3: Composition/information on ingredients

### 3.1 Substances

Name of substance	Glutaraldehyde solution, 25% w/w, For Electron Microscopy
Identifiers	
CAS No	111-30-8
EC No	203-856-5
Index No (GB CLP)	605-022-00-X

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Specific Conc. Limits	M-Factors	ATE	Exposure route
STOT SE 3; H335: C ≥ 0.5 %	M-factor (acute) = 1	100 mg/kg 0.5 mg/l/4h	oral inhalation: vapour

Molecular formula

C<sub>5</sub>H<sub>8</sub>O<sub>2</sub>

Molar mass

100.1 g/mol

### SECTION 4: First aid measures

#### 4.1 Description of first aid measures

##### General notes

Do not leave affected person unattended. Remove victim out of the danger area. Keep affected person warm, still and covered. Take off immediately all contaminated clothing. In all cases of doubt, or when symptoms persist, seek medical advice. In case of unconsciousness place person in the recovery position. Never give anything by mouth.

##### Following inhalation

If breathing is irregular or stopped, immediately seek medical assistance and start first aid actions. In case of respiratory tract irritation, consult a physician. Provide fresh air.

##### Following skin contact

Wash with plenty of soap and water.

##### Following eye contact

Remove contact lenses, if present and easy to do. Continue rinsing. Irrigate copiously with clean, fresh water for at least 10 minutes, holding the eyelids apart.

##### Following ingestion

Rinse mouth with water (only if the person is conscious). Do NOT induce vomiting.

#### 4.2 Most important symptoms and effects, both acute and delayed

Symptoms and effects are not known to date.

#### 4.3 Indication of any immediate medical attention and special treatment needed

none

### SECTION 5: Firefighting measures

#### 5.1 Extinguishing media

##### Suitable extinguishing media

Water spray, BC-powder, Carbon dioxide (CO<sub>2</sub>)

##### Unsuitable extinguishing media

Water jet

#### 5.2 Special hazards arising from the substance or mixture

##### Hazardous combustion products

Carbon monoxide (CO), Carbon dioxide (CO<sub>2</sub>)

#### 5.3 Advice for firefighters

In case of fire and/or explosion do not breathe fumes. Co-ordinate firefighting measures to the fire surroundings. Do not allow firefighting water to enter drains or water courses. Collect contaminated firefighting water separately. Fight fire with normal precautions from a reasonable distance.

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### SECTION 6: Accidental release measures

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

For non-emergency personnel

Remove persons to safety.

For emergency responders

Wear breathing apparatus if exposed to vapours/dust/spray/gases.

#### 6.2 Environmental precautions

Keep away from drains, surface and ground water. Retain contaminated washing water and dispose of it. If substance has entered a water course or sewer, inform the responsible authority.

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

Advice on how to contain a spill

Covering of drains

Advice on how to clean up a spill

Wipe up with absorbent material (e.g. cloth, fleece). Collect spillage: sawdust, kieselgur (diatomite), sand, universal binder

Appropriate containment techniques

Use of adsorbent materials.

Other information relating to spills and releases

Place in appropriate containers for disposal. Ventilate affected area.

#### 6.4 Reference to other sections

Hazardous combustion products: see section 5. Personal protective equipment: see section 8. Incompatible materials: see section 10. Disposal considerations: see section 13.

### SECTION 7: Handling and storage

#### 7.1 Precautions for safe handling

Recommendations

- Measures to prevent fire as well as aerosol and dust generation

Use local and general ventilation. Use only in well-ventilated areas.

Advice on general occupational hygiene

Wash hands after use. Do not eat, drink and smoke in work areas. Remove contaminated clothing and protective equipment before entering eating areas. Never keep food or drink in the vicinity of chemicals. Never place chemicals in containers that are normally used for food or drink. Keep away from food, drink and animal feedingstuffs.

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

- Ventilation requirements

Keep any substance that emits harmful vapours or gases in a place that allows these to be permanently extracted.

- Specific designs for storage rooms or vessels

- Storage temperature

Recommended storage temperature: 2 – 8 °C

- Packaging compatibilities

Only packagings which are approved (e.g. acc. to ADR) may be used.

#### 7.3 Specific end use(s)

See section 16 for a general overview.

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### SECTION 8: Exposure controls/personal protection

#### 8.1 Control parameters

Occupational exposure limit values (Workplace Exposure Limits)											
Country	Name of agent	CAS No	Identifier	TWA [ppm]	TWA [mg/m <sup>3</sup> ]	STEL [ppm]	STEL [mg/m <sup>3</sup> ]	Ceiling-C [ppm]	Ceiling-C [mg/m <sup>3</sup> ]	Notation	Source
GB	glutaraldehyde	111-30-8	WEL	0.05	0.2	0.05	0.2				EH40/2005

Notation

Ceiling-C

STEL

TWA

ceiling value is a limit value above which exposure should not occur  
short-term exposure limit; a limit value above which exposure should not occur and which is related to a 15-minute period (unless otherwise specified)  
time-weighted average (long-term exposure limit); measured or calculated in relation to a reference period of 8 hours  
time-weighted average (unless otherwise specified)

#### 8.2 Exposure controls

Appropriate engineering controls

General ventilation.

Individual protection measures (personal protective equipment)

Eye/face protection

Wear eye/face protection.

Skin protection

- Hand protection

Wear suitable gloves. Chemical protection gloves are suitable, which are tested according to EN 374. Check leak-tightness/impermeability prior to use. In the case of wanting to use the gloves again, clean them before taking off and air them well. For special purposes, it is recommended to check the resistance to chemicals of the protective gloves mentioned above together with the supplier of these gloves.

- Other protection measures

Take recovery periods for skin regeneration. Preventive skin protection (barrier creams/ointments) is recommended. Wash hands thoroughly after handling.

Respiratory protection

In case of inadequate ventilation wear respiratory protection.

Environmental exposure controls

Use appropriate container to avoid environmental contamination. Keep away from drains, surface and ground water.

### SECTION 9: Physical and chemical properties

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

Physical state	liquid
Colour	Colourless Solution
Odour	characteristic
Melting point/freezing point	not determined
Boiling point or initial boiling point and boiling range	not determined

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Flammability	this material is combustible, but will not ignite readily
Lower and upper explosion limit	not determined
Flash point	not determined
Auto-ignition temperature	not determined
Decomposition temperature	not relevant
pH (value)	not determined
Kinematic viscosity	not determined
Solubility(ies)	not determined

### Partition coefficient

Partition coefficient n-octanol/water (log value)	this information is not available
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Vapour pressure	not determined
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### Density and/or relative density

Density	not determined
Relative vapour density	information on this property is not available

Particle characteristics	not relevant (liquid)
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## 9.2 Other information

Information with regard to physical hazard classes	hazard classes acc. to GHS (physical hazards): not relevant
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### Other safety characteristics

Liquid content	100 %
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### SECTION 10: Stability and reactivity

#### 10.1 Reactivity

Concerning incompatibility: see below "Conditions to avoid" and "Incompatible materials".

#### 10.2 Chemical stability

See below "Conditions to avoid".

#### 10.3 Possibility of hazardous reactions

No known hazardous reactions.

#### 10.4 Conditions to avoid

There are no specific conditions known which have to be avoided.

#### 10.5 Incompatible materials

Oxidisers

#### 10.6 Hazardous decomposition products

Reasonably anticipated hazardous decomposition products produced as a result of use, storage, spill and heating are not known. Hazardous combustion products: see section 5.

### SECTION 11: Toxicological information

#### 11.1 Information on toxicological effects

##### Classification acc. to GHS

##### Acute toxicity

Toxic if swallowed. Fatal if inhaled.

##### - Acute toxicity estimate (ATE)

Oral	100 mg/kg
Inhalation: vapour	0.5 mg/l/4h

##### Skin corrosion/irritation

Causes severe skin burns and eye damage.

##### Serious eye damage/eye irritation

Causes serious eye damage.

##### Respiratory or skin sensitisation

May cause allergy or asthma symptoms or breathing difficulties if inhaled. May cause an allergic skin reaction.

##### Germ cell mutagenicity

Shall not be classified as germ cell mutagenic.

##### Carcinogenicity

Shall not be classified as carcinogenic.

##### Reproductive toxicity

Shall not be classified as a reproductive toxicant.

##### Specific target organ toxicity - single exposure

May cause respiratory irritation.

##### Specific target organ toxicity - repeated exposure

Shall not be classified as a specific target organ toxicant (repeated exposure).

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Aspiration hazard

Shall not be classified as presenting an aspiration hazard.

Other information

Corrosive to the respiratory tract.

### 11.2 Information on other hazards

There is no additional information.

## SECTION 12: Ecological information

### 12.1 Toxicity

Very toxic to aquatic life with long lasting effects.

### 12.2 Persistence and degradability

Data are not available.

### 12.3 Bioaccumulative potential

Data are not available.

### 12.4 Mobility in soil

Data are not available.

### 12.5 Results of PBT and vPvB assessment

According to the results of its assessment, this substance is not a PBT or a vPvB.

### 12.6 Endocrine disrupting properties

Does not contain an endocrine disruptor (ED) at a concentration of  $\geq 0,1\%$ .

### 12.7 Other adverse effects

Data are not available.

## SECTION 13: Disposal considerations

### 13.1 Waste treatment methods

Sewage disposal-relevant information

Do not empty into drains. Avoid release to the environment. Refer to special instructions/safety data sheets.

Waste treatment of containers/packages

It is a dangerous waste; only packagings which are approved (e.g. acc. to ADR) may be used. Completely emptied packages can be recycled. Handle contaminated packages in the same way as the substance itself.

#### Remarks

Please consider the relevant national or regional provisions. Waste shall be separated into the categories that can be handled separately by the local or national waste management facilities.



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### SECTION 14: Transport information

#### 14.1 UN number or ID number

ADR/RID	UN 2927
IMDG-Code	UN 2927
ICAO-TI	UN 2927

#### 14.2 UN proper shipping name

ADR/RID	TOXIC LIQUID, CORROSIVE, ORGANIC, N.O.S.
IMDG-Code	TOXIC LIQUID, CORROSIVE, ORGANIC, N.O.S.
ICAO-TI	Toxic liquid, corrosive, organic, n.o.s.
Technical name	Glutaraldehyde solution, 25% w/w, For Electron Microscopy

#### 14.3 Transport hazard class(es)

ADR/RID	6.1 (8)
IMDG-Code	6.1 (8)
ICAO-TI	6.1 (8)

#### 14.4 Packing group

ADR/RID	II
IMDG-Code	II
ICAO-TI	II

#### 14.5 Environmental hazards

hazardous to the aquatic environment

#### 14.6 Special precautions for user

Provisions for dangerous goods (ADR) should be complied within the premises.

#### 14.7 Maritime transport in bulk according to IMO instruments

The cargo is not intended to be carried in bulk.

#### Information for each of the UN Model Regulations

##### Agreement concerning the International Carriage of Dangerous Goods by Road (ADR) - Additional information

Classification code	TC1
Danger label(s)	6.1+8, fish and tree



Environmental hazards	yes (hazardous to the aquatic environment)
Special provisions (SP)	274, 802(ADN)
Excepted quantities (EQ)	E4
Limited quantities (LQ)	100 ml
Transport category (TC)	2
Tunnel restriction code (TRC)	D/E

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Hazard identification No 68

Emergency Action Code 2X

### Regulations concerning the International Carriage of Dangerous Goods by Rail (RID) - Additional information

Classification code TC1

Danger label(s) 6.1+8, fish and tree



Environmental hazards yes (hazardous to water)

Special provisions (SP) 274, 802(ADN)

Excepted quantities (EQ) E4

Limited quantities (LQ) 100 ml

Transport category (TC) 2

Hazard identification No 68

### International Maritime Dangerous Goods Code (IMDG) - Additional information

Marine pollutant yes (hazardous to the aquatic environment)

Danger label(s) 6.1+8, fish and tree



Special provisions (SP) 274

Excepted quantities (EQ) E4

Limited quantities (LQ) 100 mL

EmS F-A, S-B

Stowage category B

### International Civil Aviation Organization (ICAO-IATA/DGR) - Additional information

Environmental hazards yes (hazardous to the aquatic environment)

Danger label(s) 6.1+8



Special provisions (SP) A4, A137

Excepted quantities (EQ) E4

Limited quantities (LQ) 0,5 L

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### SECTION 15: Regulatory information

#### 15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

##### Relevant provisions of the European Union (EU)

###### Deco-Paint Directive

VOC content	100 %
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###### Industrial Emissions Directive (IED)

VOC content	100 %
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###### Directive on the restriction of the use of certain hazardous substances in electrical and electronic equipment (RoHS)

not listed

###### Regulation concerning the establishment of a European Pollutant Release and Transfer Register (PRTR)

not listed

###### Water Framework Directive (WFD)

not listed

###### Regulation on persistent organic pollutants (POP)

not listed

###### National regulations (GB)

###### List of substances subject to authorisation (GB REACH, Annex 14) / SVHC - candidate list

not listed

###### Restrictions according to GB REACH, Annex 17

Dangerous substances with restrictions (GB REACH, Annex 17)			
Name of substance	Name acc. to inventory	CAS No	No
Glutaraldehyde solution, 25% w/w, For Electron Microscopy	this product meets the criteria for classification in accordance with Regulation No 1272/2008/EC		3

###### National inventories

Country	Inventory	Status
EU	REACH Reg.	substance is listed
US	TSCA	substance is listed (ACTIVE)

###### Legend

REACH Reg. REACH registered substances  
TSCA Toxic Substance Control Act

#### 15.2 Chemical safety assessment

No Chemical Safety Assessment has been carried out for this substance.

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### SECTION 16: Other information

#### Abbreviations and acronyms

Abbr.	Descriptions of used abbreviations
ADR	Accord relatif au transport international des marchandises dangereuses par route (Agreement concerning the International Carriage of Dangerous Goods by Road)
ATE	Acute Toxicity Estimate
CAS	Chemical Abstracts Service (service that maintains the most comprehensive list of chemical substances)
Ceiling-C	Ceiling value
DGR	Dangerous Goods Regulations (see IATA/DGR)
EC No	The EC Inventory (EINECS, ELINCS and the NLP-list) is the source for the seven-digit EC number, an identifier of substances commercially available within the EU (European Union)
ED	Endocrine disruptor
EH40/2005	EH40/2005 Workplace exposure limits ( <a href="http://www.nationalarchives.gov.uk/doc/open-government-licence/">http://www.nationalarchives.gov.uk/doc/open-government-licence/</a> )
EINECS	European Inventory of Existing Commercial Chemical Substances
ELINCS	European List of Notified Chemical Substances
EmS	Emergency Schedule
GB CLP	The Chemicals (Health and Safety) and Genetically Modified Organisms (Contained Use) (Amendment etc.) (EU Exit) Regulations 2019, SI 2019/720 (as amended)
GB REACH	The REACH etc. (Amendment etc.) (EU Exit) Regulations 2019, SI 2019/758 (as amended)
GHS	"Globally Harmonized System of Classification and Labelling of Chemicals" developed by the United Nations
IATA	International Air Transport Association
IATA/DGR	Dangerous Goods Regulations (DGR) for the air transport (IATA)
ICAO	International Civil Aviation Organization
ICAO-TI	Technical instructions for the safe transport of dangerous goods by air
IMDG	International Maritime Dangerous Goods Code
IMDG-Code	International Maritime Dangerous Goods Code
index No	The Index number is the identification code given to the substance in Part 3 of Annex VI to Regulation (EC) No 1272/2008
M-factor	Means a multiplying factor. It is applied to the concentration of a substance classified as hazardous to the aquatic environment acute category 1 or chronic category 1, and is used to derive by the summation method the classification of a mixture in which the substance is present
NLP	No-Longer Polymer
PBT	Persistent, Bioaccumulative and Toxic
ppm	Parts per million
REACH	Registration, Evaluation, Authorisation and Restriction of Chemicals
RID	Règlement concernant le transport International ferroviaire des marchandises Dangereuses (Regulations concerning the International carriage of Dangerous goods by Rail)
STEL	Short-term exposure limit

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Abbr.	Descriptions of used abbreviations
TWA	Time-weighted average
VOC	Volatile Organic Compounds
vPvB	Very Persistent and very Bioaccumulative
WEL	Workplace exposure limit

### Key literature references and sources for data

Agreement concerning the International Carriage of Dangerous Goods by Road (ADR). Regulations concerning the International Carriage of Dangerous Goods by Rail (RID). International Maritime Dangerous Goods Code (IMDG). Dangerous Goods Regulations (DGR) for the air transport (IATA).

### List of relevant phrases (code and full text as stated in section 2 and 3)

Code	Text
H301	Toxic if swallowed.
H314	Causes severe skin burns and eye damage.
H317	May cause an allergic skin reaction.
H330	Fatal if inhaled.
H334	May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H335	May cause respiratory irritation.
H400	Very toxic to aquatic life.
H411	Toxic to aquatic life with long lasting effects.

### Disclaimer

This information is based upon the present state of our knowledge. This SDS has been compiled and is solely intended for this product.