



# Material Safety Data Sheet

**Catalog Number:** 195199  
**Revision date:** 26-Apr-2006

## 1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND COMPANY INFORMATION

**Catalog Number:** 195199

**Product name:** GLUTARALDEHYDE 25% AQUEOUS SOLUTION

**Synonyms:** Glutaric dialdehyde; 1,3-Diformyl propane; Cidex; Glutarol-1,5-pentanedial; 1,5-Pentanedione

**Supplier:**

MP Biomedicals, LLC  
29525 Fountain Parkway  
Solon, OH 44139  
tel: 440-337-1200

**Emergency telephone number:** CHEMTREC: 1-800-424-9300 (1-703-527-3887)

## 2. COMPOSITION/INFORMATION ON INGREDIENTS

Components	CAS Number	Weight %	ACGIH Exposure Limits:	OSHA Exposure Limits:
WATER	7732-18-5	70 - 80%	None	None
GLUTARALDEHYDE	111-30-8	20 - 30%	None	None

## 3. HAZARDS IDENTIFICATION

**EMERGENCY OVERVIEW:** Harmful to flora, fauna, soil organisms and aquatic organisms., Toxic if swallowed. May be toxic by inhalation or skin contact. , The product causes burns of eyes, skin and mucous membranes, May cause sensitization by skin contact

**Category of Danger:**

Corrosive , Toxic , Dangerous for the environment , Skin Sensitizer , Lachrymator

**Principle routes of exposure:** Skin

**Inhalation:** Harmful by inhalation.

**Ingestion:** Toxic if swallowed.

Can burn mouth, throat, and stomach

**Skin contact:** Harmful in contact with skin.

Causes skin burns

May cause allergic skin reaction

**Eye contact:** Risk of serious damage to eyes

Vapors extremely irritating to eyes and respiratory tract

**ANSI Classification** Sensitizer - skin, Irritant - eye, severe

**Statements of hazard** MAY CAUSE ALLERGIC SKIN REACTION.

Toxic if swallowed

CAUSES EYE IRRITATION.

**Statement of Spill or Leak - ANSI Label** Contain and/or absorb spill with inert material (e.g. sand, vermiculite), then place in suitable container. Do not flush to sewer or allow to enter waterways. Use appropriate Personal Protective Equipment.

**Statement of First Aid** In case of contact, immediately flush eyes or skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Wash clothing before reuse. Call a physician. If swallowed, do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Call a physician. In case of contact, immediately flush skin with plenty of water. Remove contaminated clothing and shoes. In case of contact, flush eyes with running water for at least 15 minutes. Consult a physician for irritation or any other symptom.

**Precautions - ANSI Label** Avoid contact with skin, eyes and clothing Do not taste or swallow. Wash thoroughly after handling. Avoid breathing vapors. Avoid prolonged or repeated contact with skin. Wash thoroughly after handling.

#### 4. FIRST AID MEASURES

**General advice:** In the case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

**Inhalation:** Move to fresh air. Call a physician immediately.

**Skin contact:** Remove and wash contaminated clothing before re-use Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician Consult a physician if necessary Wash off immediately with soap and plenty of water

**Ingestion:** If swallowed, seek medical advice immediately and show this container or label. Do not induce vomiting without medical advice. Never give anything by mouth to an unconscious person. Consult a physician

**Eye contact:** Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes.

**Protection of first-aiders:** No information available

**Medical conditions aggravated by exposure:** None known

#### 5. FIRE FIGHTING MEASURES

**Suitable extinguishing media:**

Use dry chemical, CO<sub>2</sub>, water spray or "alcohol" foam

**Specific hazards:**

Burning produces irritant fumes.

**Unusual hazards:**

None known

**Special protective equipment for firefighters:**

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear

**Specific methods:**

Water mist may be used to cool closed containers.

**Flash point:**

Not determined

**Autoignition temperature:**

225 °C (DIN 51794)

**NFPA rating:**

NFPA Health:	2
NFPA Flammability:	3
NFPA Reactivity:	0

#### 6. ACCIDENTAL RELEASE MEASURES

**Personal precautions:**

Use personal protective equipment.

**Environmental precautions:**

Do not flush into surface water or sanitary sewer system.

**Methods for cleaning up:**

Soak up with inert absorbent material.

#### 7. HANDLING AND STORAGE

**Storage:**

+4°C

STORE UNDER NITROGEN

**Handling:**

Use only in area provided with appropriate exhaust ventilation.

**Safe handling advice:**

Wear personal protective equipment. Remove and wash contaminated clothing before reuse.

**Technical measures/storage conditions:**

Keep containers tightly closed in a cool, well-ventilated place. Keep container tightly closed in a dry and well-ventilated place.

**Incompatible products:**

Oxidising and spontaneously flammable products

## 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

**Engineering measures:** Ensure adequate ventilation.

**PERSONAL PROTECTIVE EQUIPMENT**

**Respiratory protection:** Breathing apparatus only if aerosol or dust is formed.

**Hand protection:** Pvc or other plastic material gloves

**Skin and body protection:** Usual safety precautions while handling the product will provide adequate protection against this potential effect.

**Eye protection:** Safety glasses with side-shields

**Hygiene measures:** Handle in accordance with good industrial hygiene and safety practice.



## 9. PHYSICAL AND CHEMICAL PROPERTIES

**Appearance and Odor**

Colorless, oily; pungent odor

**Physical state:**

Liquid

**Formula:**

C5-H8-O2

**Molecular weight:**

100.11

**Melting point/range:**

-14 °C

**Boiling point/range:**

187 - 189 °C

**Density:**

1.061 g/cm<sup>3</sup> at 20 °C

**Vapor pressure:**

22 hPa at 20 °C

**Evaporation rate:**

No data available

**Vapor density:**

3.4 (air = 1)

**Solubility (in water):**

Completely miscible

**Flash point:**

Not determined

**Autoignition temperature:**

225 °C (DIN 51794)

## 10. STABILITY AND REACTIVITY

**Stability:**

Stable under recommended storage conditions.

**Polymerization:**

None under normal processing.

**Hazardous decomposition products:**

Thermal decomposition can lead to release of irritating gases and vapours such as carbon oxides.

**Materials to avoid:**

-

Water contact produces a polymer solution. Incompatible with strong acids, caustics, ammonia, amines, strong oxidizers.

**Conditions to avoid:**

Exposure to air or moisture over prolonged periods.

## 11. TOXICOLOGICAL INFORMATION

**Product Information**

**Acute toxicity**

Components  
WATER  
GLUTARALDEHYDE

RTECS Number:  
ZC0110000  
MA2450000

**Selected LD50s and LC50s**  
Oral LD50 Rat = > 90 ml/kg  
Inhalation LC50 Rat : 480 mg/m<sup>3</sup>/4H  
Oral LD50 Rat : 134 mg/kg  
Oral LD50 Mouse : 100 mg/kg  
Dermal LD50 Rabbit : 560 uL/kg

**Chronic toxicity:** Chronic exposure may cause nausea and vomiting, higher exposure causes unconsciousness.  
**Local effects:** Symptoms of overexposure may be headache, dizziness, tiredness, nausea and vomiting.  
**Specific effects:** May include moderate to severe erythema (redness) and moderate edema (raised skin), nausea, vomiting, headache.  
**Primary irritation:** No data is available on the product itself.  
**Carcinogenic effects:** No data is available on the product itself.  
**Mutagenic effects:** No data is available on the product itself.  
**Reproductive toxicity:** No data is available on the product itself.

Components  
GLUTARALDEHYDE

**NIOSH - Health Effects**

Mutagenesis; possible teratogenesis; eye, nose, and throat irritation

**NIOSH - Target Organs**

respiratory system, skin, eyes

## 12. ECOLOGICAL INFORMATION

**Mobility:** No data available  
**Bioaccumulation:** No data available  
**Ecotoxicity effects:** No data available  
**Aquatic toxicity:** May cause long-term adverse effects in the aquatic environment.

<b>Components</b>	<b>U.S. DOT - Appendix B - Marine Pollutan</b>	<b>U.S. DOT - Appendix B - Severe Marine Pollutants</b>	<b>United Kingdom - The Red List:</b>
WATER	Not Listed	Not Listed	Not Listed
GLUTARALDEHYDE	Not Listed	Not Listed	Not Listed

<b>Components</b>	<b>Germany VCI (WGK)</b>	<b>World Health Organization (WHO) - Drinking Water</b>	<b>Ecotoxicity - Fish Species Data</b>
WATER	Not Listed	Not Listed	Not Listed
GLUTARALDEHYDE	2	Not Listed	Not Listed

<b>Components</b>	<b>Ecotoxicity - Freshwater Algae Data</b>	<b>Ecotoxicity - Microtox Data</b>	<b>Ecotoxicity - Water Flea Data</b>
WATER	Not Listed	Not Listed	Not Listed
GLUTARALDEHYDE	Not Listed	EC50 (5 min) Photobacterium phosphoreum: 76.0 mg/L Microtox test.	Not Listed

<b>Components</b>	<b>EPA - ATSDR Priority List</b>	<b>EPA - HPV Challenge Program Chemical List</b>	<b>California - Priority Toxic Pollutants</b>
WATER	Not Listed	Not Listed	Not Listed
GLUTARALDEHYDE	Not Listed	indicator 2; Not sponsored	Not Listed

<b>Components</b>	<b>California - Priority Toxic Pollutants</b>	<b>California - Priority Toxic Pollutants</b>
WATER	Not Listed	Not Listed
GLUTARALDEHYDE	Not Listed	Not Listed

### 13. DISPOSAL CONSIDERATIONS

**Waste from residues / unused products:**

Waste disposal must be in accordance with appropriate Federal, State, and local regulations. This product, if unaltered by use, may be disposed of by treatment at a permitted facility or as advised by your local hazardous waste regulatory authority. Residue from fires extinguished with this material may be hazardous.

**Contaminated packaging:****Methods for cleaning up:**

Do not re-use empty containers  
Soak up with inert absorbent material.

### 14. TRANSPORT INFORMATION

**UN/Id No:**

Not regulated

**DOT:****Proper shipping name:**

Not Regulated

**Components**

WATER

GLUTARALDEHYDE

**U.S. DOT - Appendix A Table 1 - Reportable Quantities**

Not Listed

Not Listed

**TDG (Canada):****WHMIS hazard class:**

E corrosive material



:

**IMDG/IMO****IMDG - Hazard Classifications**

Not Applicable

**Components**

WATER

GLUTARALDEHYDE

**U.S. DOT - Appendix B - Marine Pollutant**

Not Listed

Not Listed

**U.S. DOT - Appendix B - Severe Marine Pollutants**

Not Listed

Not Listed

**IMO-labels:**

### 15. REGULATORY INFORMATION

**International Inventories****Components**

WATER

**Inventory - United States TSCA - Sect. 8(b)**

Present

**Canada DSL Inventory List -**

Present

**Australia (AICS):**

Present

**Inventory - China:**

Present

EU EINECS List -	231-791-2; H2O
Korean KECL:	KE-35400
Philippines PICCS:	Present
Components	
GLUTARALDEHYDE	
Inventory - United States TSCA - Sect. 8(b)	Present
Canada DSL Inventory List -	Present
Australia (AICS):	Present
Inventory - China:	Present
EU EINECS List -	203-856-5; C5H8O2
Inventory - Japan:	2-509
Korean KECL:	KE-27969
Philippines PICCS:	Present

**U.S. regulations:**

Components	California Proposition 65	Massachusetts Right to Know List:	New Jersey Right to Know List:	Pennsylvania Right to Know List:
WATER	- Not Listed	Not Listed	Not Listed	Not Listed
GLUTARALDEHYDE	Not Listed	[present]	sn 0960	[present]
Components	Florida substance List:	Rhode Island Right to Know List:	Illinois - Toxic Air Contaminants	Connecticut - Hazardous Air Pollutants
WATER	Not Listed	Not Listed	Not Listed	Not Listed
GLUTARALDEHYDE	[present]	Toxic	Not Listed	14 ug/m <sup>3</sup> HLV
Components	SARA 313 Emission reporting/Toxic Release of Chemicals	CERCLA/SARA - Section 302 Extremely Haz	NTP:	IARC:
WATER	Not Listed	Not Listed	None	None
GLUTARALDEHYDE	Not Listed	Not Listed	None	None

**SARA 313 Notification:**

The above is your notification as to the SARA 313 listing for this product(s) pursuant to Section 313 of Title III of the Superfund Ammendments and Reauthorization Act of 1986 and 40 CFR Part 372.

If you are unsure if you are subject to the reporting requirements of Section 313, or need more information, please call the EPA Emergency Planning and Community Right-To-Know Information Hotline: (800) 535-0202 or (202) 479-2499 (in Washington, DC or Alaska).

**State Notification:**

The above information is your notice as to the Right-to-Know listings of the stated product(s). Individual states will list chemicals for a variety of reasons including, but not limited to, the compounds toxicity; carcinogenic, tumorigenic and/or reproductive hazards; and the compounds environmental impact if accidentally released.

**16. OTHER INFORMATION**

**Prepared by:** Health & Safety

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**End of Safety Data Sheet**