

1. PRODUCT AND COMPANY IDENTIFICATION

Product Identifier

Product Name Glutaraldehyde, 50% Solution

Other means of identification

Product Code(s) M155

UN/ID no. 3265

Synonyms No information available

Recommended use of the chemical and restrictions on use

Recommended Use For Further Manufacturing Use Only.

Uses advised against Not for Human or Animal Drug Use

Details of the supplier of the safety data sheet

Company Address

VWR International, LLC
 Radnor Corporate Center
 100 Matsonford Road
 Radnor, PA 19087-8660

Manufacturer Address

VWR Chemicals, LLC
 28600 Fountain Parkway
 Solon, Ohio 44139

Distributor

AMRESCO INC.
 6681 Cochran Road
 SOLON, OHIO 44139

Company Phone Number 1-800-829-2805

E-mail Address info@amresco-inc.com

Emergency Telephone Number

Emergency Telephone Number Chemtrec 1-800-424-9300

2. HAZARDS IDENTIFICATION

Classification

OSHA Regulatory Status

This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

| | |
|---|---------------------------|
| Acute Toxicity - Oral | Category 4 |
| Acute Toxicity - Dermal | Category 4 |
| Acute toxicity - Inhalation (Dusts/Mists) | Category 3 |
| Skin Corrosion/Irritation | Category 1 Sub-category B |
| Serious Eye Damage/Eye Irritation | Category 1 |
| Respiratory Sensitization | Category 1 |
| Skin Sensitization | Category 1 |

Label elements

Emergency Overview

Danger

Hazard statements

H302 - Harmful if swallowed

H312 - Harmful in contact with skin

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

**Appearance** Clear Yellowish**Physical State** Liquid**Odor** No information available**Precautionary Statements - Prevention**

Wash face, hands and any exposed skin thoroughly after handling
 Do not eat, drink or smoke when using this product
 Use only outdoors or in a well-ventilated area
 Do not breathe dusts or mists
 Wear protective gloves/protective clothing/eye protection/face protection
 In case of inadequate ventilation wear respiratory protection
 Contaminated work clothing must not be allowed out of the workplace

Precautionary Statements - Response

Specific treatment (see .? on this label)
 Immediately call a POISON CENTER or doctor
 Specific treatment (see .? on this label)
 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 or doctor
 Call a POISON CENTER or doctor if you feel unwell
 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/ shower
 If skin irritation or rash occurs: Get medical advice/attention
 Wash contaminated clothing before reuse
 IF INHALED: Remove person to fresh air and keep comfortable for breathing
 Immediately call a POISON CENTER or doctor
 IF SWALLOWED: Call a POISON CENTER or doctor if you feel unwell
 Rinse mouth
 Do NOT induce vomiting

Precautionary Statements - Storage

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

Precautionary Statements - Disposal

Dispose of contents/container to an approved waste disposal plant

Hazards not otherwise classified (HNOC)

Not regulated

Other Information

- Toxic to aquatic life with long lasting effects
- Very toxic to aquatic life

3. COMPOSITION/INFORMATION ON INGREDIENTS

| Chemical Name | CAS-No | EC No. | Weight % | Trade Secret |
|----------------|----------|-----------|----------|----------------|
| Glutaraldehyde | 111-30-8 | 203-856-5 | 45-55 | Not applicable |
| Methanol | 67-56-1 | 200-659-6 | 0-0.5 | Not applicable |

4. FIRST AID MEASURES

First Aid Measures

| | |
|---------------------|--|
| Eye Contact | Rinse thoroughly with plenty of water for at least 15 minutes, lifting lower and upper eyelids. Consult a physician. |
| Skin Contact | Wash off immediately with soap and plenty of water removing all contaminated clothes and shoes. |
| Inhalation | Move to fresh air. If not breathing, give artificial respiration. |
| Ingestion | Never give anything by mouth to an unconscious person. Rinse mouth. |

Most important symptoms and effects, both acute and delayed**Most Important Symptoms/Effects** No information available.**Indication of any immediate medical attention and special treatment needed****Notes to Physician** Treat symptomatically.**5. FIRE-FIGHTING MEASURES****Suitable Extinguishing Media**

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Unsuitable Extinguishing Media No information available.**Specific Hazards Arising from the Chemical**

No information available.

Hazardous Combustion Products Carbon oxides.**Explosion Data****Sensitivity to Mechanical Impact** None.**Sensitivity to Static Discharge** None.**Protective Equipment and Precautions for Firefighters**

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

6. ACCIDENTAL RELEASE MEASURES**Personal precautions, protective equipment and emergency procedures****Personal protection** Ensure adequate ventilation, especially in confined areas.**Environmental Precautions****Environmental Precautions** See Section 12 for additional Ecological information.**Methods and material for containment and cleaning up****Methods for Containment** Prevent further leakage or spillage if safe to do so.**Methods for Cleaning Up** Cover with dry lime or soda ash. Pick up and transfer to properly labeled containers. Ventilate area and wash spill site after material pickup is complete.**7. HANDLING AND STORAGE****Precautions for Safe Handling****Handling** Handle in accordance with good industrial hygiene and safety practice. Container may be opened only under exhaust ventilation hood.

Conditions for safe storage, including any incompatibilities

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

Incompatible Products Strong oxidizing agents. Strong bases. Strong acids.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION**Control parameters****Exposure Guidelines**

| Chemical Name | ACGIH TLV | OSHA PEL | NIOSH IDLH |
|----------------------------|------------------------------|--|--|
| Glutaraldehyde 111-30-8 | - | - | Ceiling: 0.2 ppm Ceiling: 0.8 mg/m ³ |
| Methanol 67-56-1 | 250 ppm STEL TWA: 200 ppm | TWA: 200 ppm TWA: 260 mg/m ³ | IDLH: 6000 ppm TWA: 200 ppm TWA: 260 mg/m ³ STEL: 250 ppm STEL: 325 mg/m ³ |

Appropriate engineering controls

Engineering Measures Showers
Eyewash stations
Ventilation systems.

Individual protection measures, such as personal protective equipment

Eye/Face Protection Avoid contact with eyes. Safety glasses with side-shields.

Skin and Body Protection Wear protective gloves/clothing.

Respiratory Protection If exposure limits are exceeded or irritation is experienced, NIOSH/MSHA approved respiratory protection should be worn. Positive-pressure supplied air respirators may be required for high airborne contaminant concentrations. Respiratory protection must be provided in accordance with current local regulations.

Hygiene Measures Handle in accordance with good industrial hygiene and safety practice.

9. PHYSICAL AND CHEMICAL PROPERTIES**Information on basic physical and chemical properties**

| | | | |
|-----------------------|--------------------------|-----------------------|--------------------------|
| Physical State | Liquid | Odor | No information available |
| Appearance | Clear Yellowish | Odor Threshold | No information available |
| Color | No information available | | |

| <u>Property</u> | <u>Values</u> | <u>Remarks • Method</u> |
|-------------------------------------|--------------------------|-------------------------|
| pH | No information available | |
| Melting point/freezing point | No information available | |
| Boiling Point/Range | No information available | |
| Flash Point (High in °C) | No information available | |
| Evaporation Rate | No information available | |
| Flammability (solid, gas) | No information available | |
| Flammability Limit in Air | | |
| Upper flammability limit: | No information available | |
| Lower flammability limit: | No information available | |
| Vapor pressure | No information available | |
| Vapor Density | No information available | |
| Specific Gravity | 1.129 | |
| Water Solubility | No information available | |
| Solubility in other solvents | No information available | |
| Partition coefficient | No information available | |

| | |
|----------------------------------|--------------------------|
| Autoignition Temperature | No information available |
| Decomposition Temperature | No information available |
| Kinematic viscosity | No information available |
| Dynamic viscosity | No information available |
| Explosive Properties | No information available |
| Oxidizing Properties | No information available |

Other Information

| | |
|-------------------------|--------------------------|
| Softening Point | No information available |
| Molecular Weight | No information available |
| VOC Content | No information available |
| Density | 1.1 |
| Bulk Density | No information available |

10. STABILITY AND REACTIVITY

Reactivity

No data available

Chemical Stability

Stable under recommended storage conditions.

Possibility of Hazardous Reactions

None under normal processing.

| | |
|---------------------------------|-------------------------------------|
| Hazardous Polymerization | Hazardous polymerization may occur. |
|---------------------------------|-------------------------------------|

Conditions to Avoid

Avoid initiators, accelerators, heat, pressure and contamination.

Incompatible Materials

Strong oxidizing agents. Strong bases. Strong acids.

Hazardous Decomposition Products

Carbon oxides.

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure**Product Information**

| | |
|---------------------|---|
| Inhalation | Toxic by inhalation. May cause allergy or asthma symptoms or breathing difficulties if inhaled. |
| Eye Contact | May cause irreversible damage to eyes. |
| Skin Contact | Harmful in contact with skin. Repeated or prolonged skin contact may cause allergic reactions with susceptible persons. Causes burns. |
| Ingestion | Harmful if swallowed. |

| Chemical Name | LD50 Oral | LD50 Dermal | LC50 Inhalation |
|----------------------------|----------------------|--------------------------|---|
| Glutaraldehyde 111-30-8 | = 252 mg/kg (Rat) | = 560 µL/kg (Rabbit) | = 0.1 mg/L (Rat) 4 h |
| Methanol 67-56-1 | = 6200 mg/kg (Rat) | = 15800 mg/kg (Rabbit) | = 22500 ppm (Rat) 8 h = 64000 ppm (Rat) 4 h |

Information on toxicological effects

| | |
|-----------------|---------------------------|
| Symptoms | No information available. |
|-----------------|---------------------------|

Delayed and immediate effects as well as chronic effects from short and long-term exposure

| | |
|----------------------|---------------------------|
| Sensitization | No information available. |
|----------------------|---------------------------|

Mutagenic Effects No information available.
Carcinogenicity No information available.

| Chemical Name | ACGIH | IARC | NTP | OSHA |
|----------------------------|-------|------|-----|------|
| Glutaraldehyde 111-30-8 | - | - | - | - |
| Methanol 67-56-1 | - | - | - | - |

Reproductive Toxicity No information available.
STOT - single exposure No information available.
STOT - repeated exposure No information available.
Chronic Toxicity Suspected mutagen.
Target Organ Effects Central nervous system (CNS), Heart.
Aspiration hazard No information available.

Numerical measures of toxicity - Product Information

The following values are calculated based on chapter 3.1 of the GHS document .

12. ECOLOGICAL INFORMATION

Ecotoxicity

0% of the mixture consists of component(s) of unknown hazards to the aquatic environment

| Chemical Name | Algae/aquatic plants | Toxicity to Fish | Crustacea |
|----------------------------|---|--|--|
| Glutaraldehyde 111-30-8 | 0.84: 96 h Desmodesmus subspicatus mg/L EC50 0.61: 72 h Desmodesmus subspicatus mg/L EC50 | 5.4: 96 h Pimephales promelas mg/L LC50 static 7.8 - 13: 96 h Oncorhynchus mykiss mg/L LC50 static 7.8 - 22: 96 h Lepomis macrochirus mg/L LC50 static 2.6 - 4.8: 96 h Oncorhynchus mykiss mg/L LC50 flow-through | 14: 48 h Daphnia magna mg/L EC50 0.56 - 1.0: 48 h Daphnia magna mg/L EC50 Static |
| Methanol 67-56-1 | - | 28200: 96 h Pimephales promelas mg/L LC50 flow-through 18 - 20: 96 h Oncorhynchus mykiss mL/L LC50 static 13500 - 17600: 96 h Lepomis macrochirus mg/L LC50 flow-through 100: 96 h Pimephales promelas mg/L LC50 static 19500 - 20700: 96 h Oncorhynchus mykiss mg/L LC50 flow-through | - |

Persistence and Degradability

No information available.

Bioaccumulation/Accumulation

No information available.

| Chemical Name | Partition coefficient |
|----------------------------|-----------------------|
| Glutaraldehyde 111-30-8 | 0.22 |
| Methanol 67-56-1 | -0.77 |

Other Adverse Effects No information available

13. DISPOSAL CONSIDERATIONS

Waste treatment methods

Waste Disposal Method Dispose of material in accordance with all federal, state, and local regulations.

Contaminated Packaging Do not re-use empty containers.

| Chemical Name | RCRA | RCRA - Basis for Listing | RCRA - D Series Wastes | RCRA - U Series Wastes |
|---------------|------|--------------------------|------------------------|------------------------|
| | | | | |

| | | | | |
|----------------------------|---|-----------------------------------|---|-----------------|
| Glutaraldehyde 111-30-8 | - | - | - | - |
| Methanol 67-56-1 | - | Included in waste stream: F039 | - | Ignitable waste |

| Chemical Name | RCRA - Halogenated Organic Compounds | RCRA - P Series Wastes | RCRA - F Series Wastes | RCRA - K Series Wastes |
|----------------------------|--------------------------------------|------------------------|------------------------|------------------------|
| Glutaraldehyde 111-30-8 | - | - | - | - |
| Methanol 67-56-1 | - | - | - | - |

| Chemical Name | California Hazardous Waste Status |
|----------------------------|-----------------------------------|
| Glutaraldehyde 111-30-8 | Toxic |
| Methanol 67-56-1 | Toxic; Ignitable |

14. TRANSPORT INFORMATION

DOT

UN/ID no. 3265
Proper shipping name CORROSIVE LIQUID, ACIDIC, ORGANIC, N.O.S. (CONTAINING GLUTARALDEHYDE SOLUTION)
Hazard Class 8
Packing Group II

IATA

UN/ID no. 3265
Proper shipping name CORROSIVE LIQUID, ACIDIC, ORGANIC, N.O.S. (CONTAINING GLUTARALDEHYDE SOLUTION)
Hazard Class 8
Packing Group II

15. REGULATORY INFORMATION

International Inventories

TSCA Complies
DSL/NDSL Complies
EINECS/ELINCS Complies
ENCS Does not Comply
IECSC Complies
KECL Complies
PICCS Complies
AICS Complies

Legend:

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory
DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List
EINECS/ELINCS - European Inventory of Existing Commercial Chemical Substances/EU List of Notified Chemical Substances
ENCS - Japan Existing and New Chemical Substances
IECSC - China Inventory of Existing Chemical Substances
KECL - Korean Existing and Evaluated Chemical Substances
PICCS - Philippines Inventory of Chemicals and Chemical Substances
AICS - Australian Inventory of Chemical Substances

U.S. Federal Regulations

SARA 313

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372:

| Component | SARA 313 - Threshold Values % |
|--------------------------------------|-------------------------------|
| Glutaraldehyde 111-30-8 (45-55) | - |
| Methanol 67-56-1 (0-0.5) | 1.0 |

SARA 311/312 Hazard Categories

| | |
|-----------------------------------|-----|
| Acute Health Hazard | Yes |
| Chronic Health Hazard | Yes |
| Fire Hazard | No |
| Sudden Release of Pressure Hazard | No |
| Reactive Hazard | No |

Clean Water Act

This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42)

| Chemical Name | CWA - Reportable Quantities | CWA - Toxic Pollutants | CWA - Priority Pollutants | CWA - Hazardous Substances |
|----------------------------|-----------------------------|------------------------|---------------------------|----------------------------|
| Glutaraldehyde 111-30-8 | - | - | - | - |
| Methanol 67-56-1 | - | - | - | - |

CERCLA

This material, as supplied, contains one or more substances regulated as a hazardous substance under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302)

| Chemical Name | Hazardous Substances RQs | Extremely Hazardous Substances RQs | RQ |
|----------------------------|--------------------------|------------------------------------|--|
| Glutaraldehyde 111-30-8 | - | - | - |
| Methanol 67-56-1 | 5000 lb | - | RQ 5000 lb final RQ RQ 2270 kg final RQ |

U.S. State Regulations**California Proposition 65**

This product contains the following Proposition 65 chemicals:

| Chemical Name | California Prop. 65 |
|---------------------------|---------------------|
| Glutaraldehyde - 111-30-8 | - |
| Methanol - 67-56-1 | Developmental |

U.S. State Right-to-Know Regulations

| Chemical Name | New Jersey | Massachusetts | Pennsylvania |
|----------------------------|------------|---------------|--------------|
| Glutaraldehyde 111-30-8 | X | X | X |
| Methanol 67-56-1 | X | X | X |

U.S. EPA Label Information

EPA Pesticide Registration Number Not regulated

16. OTHER INFORMATION

Issuing Date 21-Oct-2010

Revision Date 09-Mar-2016

Revision Note

No information available

Disclaimer

The above information is believed to be correct but does not purport to be all-inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. VWR International and its Affiliates shall not be held liable for any damage resulting from handling.

End of Safety Data Sheet