TED PELLA, INC.
Microscopy Products for Science and Industry

Safety Data Sheet

Product No. 18431, 18432 Glutaraldehyde, 50% EM grade
Issue Date (09-02-15)
Review Date (08-31-17)

Section 1: Product and Company Identification

Product Name: Glutaraldehyde, 50% EM grade
Synonym: Glutaral, Glutaric Dialdehyde
Chemical Family: Aldehydes

Company Name
Ted Pella, Inc., P.O. Box 492477, Redding, CA 96049-2477
Inside USA and Canada 1-800-237-3526 (Mon-Thu. 6:00AM to 4:30PM PST; Fri 6:00AM to 4:00PM PST)
Outside USA and Canada 1-530-243-2200 (Mon-Thu. 6:00AM to 4:30PM PST; Fri 6:00AM to 4:00PM PST)
CHEMTREC USA and Canada Emergency Contact Number 1-800-424-9300 24 hours a day
CHEMTREC Outside USA and Canada Emergency Contact Number +1-703-741-5970 24 hours a day

Section 2: Hazard Identification

2.1 Classification of the substance or mixture

GHS Pictograms:

GHS06 GHS05 GHS08 GHS07

GHS Categories:

GHS05 – Corrosion
- Skin Corr. 1A — H314 Causes severe skin burns and eye damage.
- Eye Dam. 1 — H318 Causes serious eye damage.

GHS06 – Toxic
- Acute Tox. 2 — H301 Toxic if swallowed.
- Acute Tox. 1 — H330 Fatal if inhaled.

GHS08 - Health hazard
- Resp. Sens. 1 — H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.

GHS07 – Irritant
- Skin Sens. 1 — H317 May cause an allergic skin reaction.
- STOT SE 3 — H335 May cause respiratory irritation.

2.2 Label Elements

Labeling according to EU guidelines:
The product has been classified and marked in accordance with EU Directives / Ordinance on Hazardous Materials.

Hazard Pictograms:

GHS05 GHS06 GHS08

Signal Word: DANGER

Hazard-determining Components of Labeling
Glutaraldehyde

Hazard Statements
H301 Toxic if swallowed.
H330 Fatal if inhaled.
H314 Causes severe skin burns and eye damage.
H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H317 May cause an allergic skin reaction.
H335 May cause respiratory irritation.

Precautionary Statements

P210	Keep away from flames and hot surfaces. – No smoking.
P235	Keep cool.
P260	Do not breathe dust/fumes/gas/mist/vapors/spray.
P264	Wash thoroughly after handling.
P271	Use only outdoors or in a well-ventilated area.
P272	Contaminated clothing must not be taken out of the workplace.
P280	Wear protective gloves/eye protection/face protection.
P284	Wear respiratory protection.
P303+P361+P353	IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P310	Immediately call a POISON CENTER/doctor.
P321	Specific treatment (see on this label).
P403+P233	Store in a well-ventilated place. Keep container tightly closed.
P405	Store locked up.
P501	Dispose of contents/container in accordance with local/regional/national/international regulations.

2.3 Other hazards

Health Effects
HMIS® Rating: Health: 4; Fire: 2; Reactivity: 0
NFPA Rating: Health: *4; Fire: 2; Reactivity: 0

(0=least, 1=Slight, 2=Moderate, 3=High, 4=Extreme)

Emergency Overview
Appearance: Transparent Liquid
Immediate effects: Corrosive to skin and eyes

Potential Health Effects
Primary Routes of entry: Inhalation, ingestion, eye and skin contact.
Signs and Symptoms of Overexposure: ND
Eyes: Causes serious eye damage.
Skin: Causes skin irritation and may cause an allergic skin reaction.
Inhalation: May cause sensitisation. Irritating to respiratory system.
Chronic Exposure: ND
Chemical Listed As Carcinogen or Potential Carcinogen: No
See Toxicological Information (Section11)

Potential environmental effects
See Ecological Information (Section 12)

Results of PBT and vPvB assessment:
PBT: NA
vPvB: NA

Section 3: Composition / Information on Ingredients

Principle Hazardous Component(s) (chemical and common name(s)) (Cas. No)	%	OSHA PEL mg/m3	ACGIH TLV mg/m3	NTP	IARC	OSHA regulated
Glutaraldehyde (111-30-8)	25-50	NE	0.2 0.05ppm	No	No	No

Section 4: First Aid Measures
If accidental overexposure is suspected:

General information	Immediately remove any clothing soiled by the product. Remove breathing equipment only after contaminated clothing have been removed. Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident. In case of irregular breathing or respiratory arrest provide artificial respiration.
Eye(s) Contact	Rinse opened eye for several minutes under running water. Then consult a doctor.
Skin Contact	Immediately wash with water and soap and rinse thoroughly.
Inhalation	Supply fresh air or oxygen; call for doctor. In case of unconsciousness place patient stably in side position for transportation.
Ingestion	Call for a doctor immediately. Drink plenty of water and provide fresh air. Do not induce vomiting.

Note to physician
Treatment: ND
Medical Conditions generally Aggravated by Exposure: ND

Section 5: Fire Fighting Measures

Flash Point: 71 °C (160 °F)
Flammable Limits: NE
Auto-ignition point: Product is not self-igniting.
Fire Extinguishing Media: CO2, powder or water spray.
Special Fire Fighting Procedures: Fight larger fires with water spray or alcohol resistant foam. Wear respiratory protective device.
Unusual Fire and Explosion Hazards: Product does not present an explosion hazard.
Hazardous combustion products: No dangerous decomposition products known.
DOT Class: Corrosive.

Section 6: Accidental Release Measures
Steps to be Taken in Case Material is Released or Spilled:
Personal precautions, protective equipment and emergency procedures
Wear protective equipment. Keep unprotected persons away.
Environmental procedures
Do not allow to enter sewers/ surface or ground water. Dilute with plenty of water. Inform respective authorities in case of seepage into water course or sewage system.
Methods and material for containment and cleaning up
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust). Use neutralizing agent. Dispose of contaminated material as waste according to item 13. Ensure adequate ventilation.
Waste Disposal Methods
Dispose of waste according to Federal, State and Local Regulations.

Section 7: Handling and Storage
Precautions to be taken in Handling and Storage:
No special handling requirements for storage.
Storage Temperature: **0-5ºC recommended for long term storage. Do not freeze.**
Storage Pressure: NA

Section 8: Exposure Controls / Personal Protection
Engineering Controls
Ventilation required: Ensure adequate ventilation.
Personal Protection Equipment
Respiratory protection: In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use respiratory protective device that is independent of circulating air.
Protective gloves: The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.
Skin protection: Wear suitable protective clothing; store protective clothing separately; immediately remove all soiled and contaminated clothing. Avoid contact with skin.
Eye protection: Tightly sealed goggles.
Additional clothing and/or equipment: Eye wash station or shower.
Exposure Guidelines
See Composition/Information on Ingredients (Section 3)

Section 9 Physical and Chemical Properties
Appearance and Physical State: Colorless liquid.
Odor (threshold): Fruit like (ND)
Specific Gravity (H_2O=1): 1.13 g/cm³
Vapor Pressure (mm Hg): 17
Vapor Density (air=1): ND
Percent Volatile by volume: ND

Flash point: 71°C
Evaporation Rate (butyl acetate=1): ND
Boiling Point: 101°C (213.8°F)
Freezing point / melting point: ND
pH: 4.5
Solubility in Water: Fully miscible.
Molecular Weight: ND
Organic solvents: 0.0 %
Water: 50.0%
VOC content: 0.0 %

Section 10: Stability and Reactivity
Stability: Stable under normal storage conditions.
Conditions to Avoid: No decomposition if used according to specifications.
Materials to Avoid (Incompatibility): No further relevant information available.
Hazardous Decomposition Products: No dangerous decomposition products known.
Hazardous Polymerization: No dangerous reactions known.

Section 11: Toxicological Information
Results of component toxicity test performed: 111-30-8 Glutaraldehyde
LD/LC50 values relevant for classification: 111-30-8 Glutaraldehyde:
Oral LD50 134 mg/kg (rat)
Dermal LD50 2560 mg/kg (rabbit)
Primary irritant effect:
On the skin**:** Caustic effect on skin and mucous membranes
On the eye: Strong caustic effect.
Sensitization: Sensitization possible through inhalation. Sensitization possible through skin contact.
Human experience: ND
This product **does not** contain any compounds listed by NTP or IARC or regulated by OSHA as a carcinogen.
Additional toxicological information:
The product shows the following dangers according to the calculation method of the General EU Classification:
Guidelines for Preparations as issued in the latest version:
Very toxic
Harmful
Corrosive
Irritant
Swallowing will lead to a strong caustic effect on mouth and throat and to the danger of perforation of esophagus and stomach.

Section 12: Ecological Information
Ecological Information:
Aquatic toxicity: No further relevant information available.
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.
Ecotoxical effects:
Remark: Very toxic for fish
Additional ecological information:
General notes:
Water hazard class 3 (German Regulation) (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 sewage water or drainage ditch undiluted or un-neutralized.
Danger to drinking water if even extremely small quantities leak into the ground.
Also poisonous for fish and plankton in water bodies.
Very toxic for aquatic organisms
Chemical Fate Information: ND

Section 13 Disposal Considerations
RCRA 40 CFR 261 Classification: ND
Recommendation: Must not be disposed together with household garbage. Do not allow product to reach sewage system.
Federal, State and local laws governing disposal of materials can differ. Ensure proper disposal compliance with proper authorities before disposal.

Section 14: Transportation Information
US DOT Information: Proper shipping name: Corrosive liquids, toxic, n.o.s. (Glutaraldehyde)
Hazard Class: 8 (6.1)
Packaging group: II
UN Number: UN2922
IATA: Proper shipping name: Corrosive liquids, toxic, n.o.s. (Glutaraldehyde)
Hazard Class: 8 (6.1)
Packing group: II
UN Number: UN2922
Marine Pollutant: None listed in USA 49CFR list of Marine Pollutants.
Canadian TDG: Corrosive liquid, toxic, n.o.s. (Glutaraldehyde)

Section 15: Regulatory Information
United States Federal Regulations
SDS complies with OSHA's Hazard Communication Rule 29, CFR 1910.1200.
SARA: Section 355 (extremely hazardous substances): None of the ingredients is listed.
Section 313 (Specific toxic chemical listings): None of the ingredients is listed.
SARA Title III: ND
RCRA: ND
TSCA: All ingredients are listed.
CERCLA: ND
State Regulations
California Proposition 65: None
International Regulations
Canada WHMIS: ND
Europe EINECS Numbers: ND
Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

Section 16: Other Information
Label Information: Corrosive, toxic
European Risk and Safety Phrases: Risk phrases: Harmful if swallowed. Toxic by inhalation. Causes burns. Irritating to respiratory system. May cause sensitisation by inhalation and skin contact.
Very toxic to aquatic organisms.
Safety phrases: Do not breathe gas/fumes/vapor/spray.
European symbols needed: ND
Canadian WHMIS Symbols:
D2B - Toxic material causing other toxic effects.
E - Corrosive material

Abbreviations used in this document
NE= Not established
NA= Not applicable
NIF= No Information Found
ND= No Data

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