

Revision Date 3-23-18

1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND THE COMPANY/UNDERTAKING

Product Name Glutaraldehyde, 70%

Product Code(s) 20100 - 20150

Recommended Use For Further Manufacturing Use. For use as tissue fixative.
Not for Human or Animal Drug Use

Synonyms ALDEHYD GLUTAROWY (POLISH) * CIDEX * 1,3-DIFORMYLPROPANE *
GLUTARAL *GLUTARALDEHYD (CZECH) * GLUTARALDEHYDE (ACGIH) *
GLUTARDIALDEHYDE * GLUTARIC DIALDEHYDE * NCI-C55425 *
1,5-PENTANEDIAL * 1,5-PENTANEDIONE * POTENTIATED ACID
GLUTARALDEHYDE * SONACIDE *

Distributor
Ladd Research
83 Holly Court
Williston, VT 05495

Emergency Telephone Number Chemtrec 1-800-424-9300

Company Phone Number 1-802-658-4961
E-mail Address sales@laddresearch.com

2. HAZARDS IDENTIFICATION

GHS - Classification

Classification Acute Toxicity Oral 3 Skin Corrosion/Irritation 1B Skin Sensitizer 1 Respiratory Sensitizer 1 Aquatic Hazard (acute) 1 Germ Cell Mutagenicity 1B

Signal Word Danger



Hazard Statements H340 - May cause genetic defects H317 - May cause an allergic skin reaction
H334 - May cause allergy or asthma symptoms or breathing difficulties if inhaled
H331 - Toxic if inhaled H301 - Toxic if swallowed H314 - Causes severe skin
burns and eye damage H400 - Very toxic to aquatic life

Precautionary Statements

P310 - Immediately call a POISON CENTRE or doctor/physician P280 - Wear protective gloves/protective clothing/eye protection/face protection P302+ P352 - IF ON SKIN: Wash with plenty of soap and water P304 + P340 - IF INHALED: Remove victim to fresh air and keep at rest in a position 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

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	EC No.	REACH Reg. No.	CAS-No	Weight %	Classification
Glutaraldehyde	-	Not available	111-30-8	68-72	T;R23/25 C;R34 R42/43 N;R50

4. FIRST AID MEASURES

Eye Contact	Rinse thoroughly with plenty of water for at least 15 minutes and 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 breathing becomes difficult, give oxygen
Ingestion	Clean mouth with water and afterwards drink plenty of water
Notes to Physician	Treat symptomatically

5. FIRE-FIGHTING MEASURES

Flammable Properties	Not flammable
Flash Point	Not determined
Suitable Extinguishing Media	Dry chemical, CO2, water spray or regular foam
Hazardous Combustion Products	Carbon oxides
Explosion Data	
Sensitivity to Mechanical Impact	Not sensitive
Sensitivity to Static Discharge	Not sensitive
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	Avoid contact with skin, eyes and clothing. Use personal protective equipment. Ensure adequate ventilation
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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

Handling Handle in accordance with good industrial hygiene and safety practice. Container may be opened only under exhaust ventilation hood.

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

Chemical Name	ACGIH TLV	OSHA PEL	NIOSH IDLH
Glutaraldehyde 111-30-8		(vacated) Ceiling: 0.2 ppm (vacated) Ceiling: 0.8 mg/m ³	Ceiling: 0.2 ppm Ceiling: 0.8 mg/m ³

Engineering Measures Showers
Eyewash stations
Ventilation systems

Personal Protective Equipment

Eye/Face Protection Tightly fitting safety goggles

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

Appearance	Clear to slightly Yellowish	
Odor	Pungent	
Odor Threshold	No information available	
Decomposition Temperature °C	No information available	
Freezing Point	No information available	
Initial Boiling Point	No information available	
Physical State	Liquid	
pH	No data available	
Flash Point	Not determined	
Autoignition Temperature	No data available	
Boiling Point/Range	No data available	
Melting Point/Range	No data available	
Flammability Limits in Air	Upper No data available	Lower No data available
Explosive Properties	No information available	
Oxidizing Properties	No information available	
Evaporation Rate	No data available	
MMHG @ 37.8 C	No data available	
Vapor Density	No data available	
Specific Gravity	1.129	
Density	1.1	
Solubility	No information available	
Partition Coefficient (n-octanol/water)	No data available	
Viscosity	No information available	

10. STABILITY AND REACTIVITY

Stability	Stable under recommended storage conditions
Incompatible Products	Strong oxidizing agents. Strong bases. Strong acids.
Conditions to Avoid	Avoid initiators, accelerators, heat, pressure and contamination. .
Hazardous Decomposition Products	Carbon oxides.
Hazardous Polymerization	Hazardous polymerization may occur.

11. TOXICOLOGICAL INFORMATION

Acute Toxicity

Product Information Toxic if swallowed. Corrosive, causes burns. Sensitizer.

Chemical Name	LD50 Oral	LD50 Dermal	LC50 Inhalation
Glutaraldehyde	66 mg/kg (Rat)	560 µL/kg (Rabbit) 2000 mg/kg (Rat)	0.1 mg/L (Rat) 4 h

Chronic Toxicity

Chronic Toxicity Suspected mutagen.

Target Organ Effects Central nervous system (CNS), Heart.

12. ECOLOGICAL INFORMATION

Ecotoxicity

Harmful to aquatic organisms.

Chemical Name	Toxicity to Algae	Toxicity to Fish	Microtox	Daphnia Magna (Water Flea)
Glutaraldehyde	EC50 = 0.61 mg/L 72 h EC50 = 0.84 mg/L 96 h	LC50= 13 mg/L Lepomis macrochirus 96 h	EC50 = 13.3 mg/L 17 h EC50 = 76.0 mg/L 5 min	EC50 = 14 mg/L 48 h

Chemical Name	Log Pow
Glutaraldehyde	= 0.22 25 °C OECD Guideline 107

13. DISPOSAL CONSIDERATIONS

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

Contaminated Packaging Dispose of in accordance with all federal, state and local regulations

14. TRANSPORT INFORMATION

IATA

UN-No 3265
Proper Shipping Name CORROSIVE LIQUID, ACIDIC, ORGANIC, N.O.S. (GLUTARALDEHYDE)
Hazard Class 8
Packing Group II

DOT

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Hazard Class 8
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15. REGULATORY INFORMATION

REACH Title VII Restrictions No information available.

Chemical Name	Dangerous Substances	Organic Solvents	Harmful Substances Whose Names Are to be Indicated on the Label	Pollution Release and Transfer Registry (Class II):	Pollution Release and Transfer Registry (Class I):	Poison and Deleterious Substances Control Law:
Glutaraldehyde	>=>=0.1 % weight	Not applicable	Not applicable	Not applicable	66	Not applicable

Component	ISHA - Harmful Substances Prohibited for Manufacturing, Importing, Transferring, or Supplying	ISHA - Harmful Substances Requiring Permission	Toxic Chemical Classification Listing (TCCL) - Toxic Chemicals	Toxic Release Inventory (TRI) - Group I	Toxic Release Inventory (TRI) - Group II
Glutaraldehyde 111-30-8 (45-55)	Not applicable	Not applicable	97-1-5, 25 % or more in mixtures	Not applicable	>= 1.0 %

International Inventories

TSCA	Complies
EINECS/ELINCS	Complies
ENCS	Complies
IECSC	Complies
KECL	Complies
PICCS	Complies
AICS	Complies

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

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)

Clean Air Act, Section 112 Hazardous Air Pollutants (HAPs) (see 40 CFR 61)

This product contains the following substances which are listed hazardous air pollutants (HAPS) under Section 112 of the Clean Air Act:

Chemical Name	CAS-No	Weight %	HAPS data	VOC Chemicals	Class 1 Ozone Depletors	Class 2 Ozone Depletors
Glutaraldehyde	111-30-8	68-72		Group IV		

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

This product does not contain any Proposition 65 chemicals.

Chemical Name	Massachusetts	New Jersey	Pennsylvania	Illinois	Rhode Island
Glutaraldehyde	X	X	X		X

International Regulations**Mexico - Grade**

Chemical Name	Carcinogen Status	Exposure Limits
Glutaraldehyde		Mexico: Ceiling= 0.7 mg/m ³ Mexico: Ceiling= 0.2 ppm

Canada**WHMIS Hazard Class**

D1B Toxic materials
D2A Very toxic materials
D2B Toxic materials
E Corrosive material

**16. OTHER INFORMATION**

Revision Date 3-23-2018

Recommended Restrictions No information available

Disclaimer

The information presented is believed to be correct and is the most accurate information available to us at this time. However, Ladd Research makes no warranty, express or implied, and assumes no liability for this information and the product described herein.
