

Material Safety Data Sheet

ALDEHYDE SANITIZER

Date of New Version: 12/02
Replaces Version: 1ST Edition
Manufacturer's Name: Alpha Inc.
Manufacturer's Address: 1301 Iowa Avenue, Longmont, CO 80501
Emergency Telephone: 303-678-7112 CHEMTREC 24 hour: 1-800-424-9300

SECTION 1

CHEMICAL PRODUCT

Product Name: Aldehyde Sanitizer
Chemical Name: Glutaraldehyde, 20% formulated aqueous solution
Chemical Family: N/A (mixture)
Formula: N/A (mixture)

SECTION 2

COMPOSITION INFORMATION

<u>Component</u>	<u>CAS #</u>	<u>Amount</u>
Water Surfactant (Trade Secret)		<= 80%
Glutaraldehyde	111-30-8	20%
Methanol	67-56-1	<= .2%

SECTION 3

HAZARDS IDENTIFICATION

Emergency Overview:
Appearance: Transparent yellow
Physical State: Liquid
Odor: Perfumed
Hazards of Product: DANGER! Corrosive. Causes irreversible eye damage. Causes skin irritation. Harmful if inhaled or swallowed. Prolonged or frequently repeated skin contact may cause allergic reactions in some individuals. Causes asthmatic signs and symptoms in hyper-reactive individuals. Aspiration may cause lung damage.

Potential Health Effects:

Effects of Single Acute Overexposure:

Inhalation: Vapor is irritating to the respiratory tract, causing stinging sensations in the nose and throat, discharge from the nose, possible bleeding from the nose, coughing, chest discomfort and tightness, difficulty with breathing, and headache. Heating the solution may result in more severe irritant effects.

Eye Contact: Liquid will cause a severe and persistent conjunctivitis, seen as excess redness and marked swelling of the conjunctiva with profuse discharge. Severe corneal injury may develop, which could permanently impair vision if prompt first aid and medical treatment are not obtained. Vapor will cause stinging sensations in the eye with excess tear production, blinking, and possibly a slight excess redness of the conjunctiva.

Skin Contact: Brief contact may cause moderate irritation with itching, local redness and possible slight swelling. Contact with solutions of glutaraldehyde may cause a harmless yellow or brownish discoloration of the skin.

Skin Absorption: No evidence of harmful effects from available information.

Swallowing: Moderately toxic. May cause moderate to marked irritation and possibly chemical burns of the mouth, throat, esophagus and stomach. There will be discomfort or pain in the chest and abdomen, nausea, vomiting, diarrhea, dizziness, faintness, drowsiness, thirst, weakness, circulatory shock, collapse and coma. Aspiration into the lungs may occur during ingestion or vomiting, resulting in lung injury.

Chronic, Prolonged or Repeated Overexposure:

Effects of Repeated Overexposure:

Repeated skin contact may cause a cumulative dermatitis

Other Effects of Overexposure:

May cause skin sensitization in a small portion of individuals and present as an allergic contact dermatitis. This usually results from contact with the liquid, but occasionally there may be a reaction to glutaraldehyde vapor. May cause asthma, particularly in those with an increased tendency to develop allergic reactions to common environmental allergens (i.e., atopic individuals).

Medical Conditions Aggravated by Exposure:

Skin contact may aggravate an existing dermatitis. Inhalation of material may aggravate asthma and inflammatory or fibrotic pulmonary disease.

SECTION 4

FIRST AID PROCEDURES

Inhalation:

Remove to fresh air. Give artificial respiration if not breathing. If breathing is difficult, oxygen may be given by qualified personnel. Obtain medical attention.

Eyes:

Immediately flush eyes with water and continue washing for at least 15 minutes. DO NOT remove contact lenses, if worn. Obtain medical attention, without delay, preferably from an ophthalmologist.

Skin:

Immediately remove contaminated clothing and shoes. Wash skin with soap and water. Obtain medical attention. Wash clothing before reuse. Discard contaminated leather articles, such as shoes and belts.

Swallowing:

DO NOT INDUCE VOMITING. Do not give anything to drink. Obtain medical attention without delay.

Notes to Physician:

The hazards of the material are due mainly to its severely irritant properties on skin and mucosal surfaces. Moderates toxic by swallowing. Due to the severely irritating or corrosive nature of the material, swallowing made to ulceration and inflammation of the upper alimentary tract with hemorrhage and fluid loss. Also, perforation of the esophagus or stomach may occur, leading to mediastinitis or peritonitis and the resultant complications. Any material aspirated during vomiting may cause lung injury. Therefore, emesis should not be induced mechanically or pharmacologically. If it is considered necessary to evacuate the stomach contents, this should be done by means least likely to cause aspiration (e.g., gastric lavage after endotracheal intubation).

SECTION 5

FIRE FIGHTING MEASURES

Flammable Properties:

Flash Point – Closed Cup (Tag Closed Cup ASTM D 56):

None

Flash Point – Open Cup (Tag Open Cup ASTM D 1310):

None

Autoignition Temperature:

None

Flammable Limits in Air (lower):

Not determined, Aqueous System

Flammable Limits in Air (upper):

Not determined, Aqueous System

Extinguishing Media:

Non-flammable (aqueous solution): After water evaporates, remaining material will burn. Use alcohol-type or all-purpose-type foam, applied by manufacturer's recommended techniques for large fires. Use carbon dioxide or dry chemical media for small fires.

Extinguishing Media to Avoid:

No information currently available.

Special Fire Fighting Procedures:

No information currently available.

Special Protective Equipment for firefighters:

Use self-contained breathing apparatus and protective clothing.

Hazardous Combustion Products:

Burning can produce the following products: Carbon monoxide and/or carbon dioxide. Carbon monoxide is highly toxic if inhaled; carbon dioxide in sufficient concentrations can act as an asphyxiant.

SECTION 6

ACCIDENTAL RELEASE MEASURES

Steps to be taken if material is released or spilled:	Very low concentrations (5 ppm or less of glutaraldehyde) can be flushed with large quantities of water. Large quantities or 'slugs' can be harmful to the treatment system. Thus, large spills should be collected for disposal. It may also be possible to decontaminate spilled material by careful application of aqueous sodium hydroxide or sodium bisulfite. Depending on conditions, considerable heat and fumes can be liberated by the decontamination reaction.
Personal Precautions:	Wear suitable protective equipment.
Environmental Precautions:	Toxic to fish; avoid discharge to natural waters.

SECTION 7

HANDLING AND STORAGE

General Handling:	Do not get in eyes, on skin, on clothing. Avoid vapor breathing. Do not swallow. Wear goggles, protective clothing and gloves. Wash thoroughly with soap and water after handling. Remove contaminated clothing and wash before reuse.
Respiratory Protection:	Use self-contained breathing apparatus in high vapor concentrations. If self-contained breathing apparatus is not available, MSHA/NIOSH approved air purifying respirator equipped with an organic vapor cartridge should be used.
Ventilation:	General (mechanical) room ventilation is expected to be satisfactory if this material is kept in covered equipment or if the solution is highly diluted. However, if vapors are strong enough to be irritating to the nose (or eyes), the TLV is probably being exceeded and special ventilation may be required.
Protective Gloves:	Nitrile (NBR) or Butyl.
Eye Protection:	Splash proof monogoggles or safety goggles with side shields in conjunction with a face shield.
Other Protective Clothing/Equipment:	Eye bath, safety shower, rubber boots, and chemical apron.
Work/Hygienic Practices:	Wash with soap and water thoroughly after handling. Wash contaminated clothing before reuse.
Other Precautions:	This product in its undiluted form must not be used in a spray or aerosol application. If dilutions or mixtures of this product are used in a spray application, full personal protective equipment is strongly recommended to prevent exposure. CAUTION! PLASTIC CONTAINER, IF PRESENT, MAY CAUSE STATIC IGNITION HAZARD. Do not handle or empty container in the presence of flammable vapors.
Waste Disposal Method:	Atomize into a very hot incinerator fire or mix with a suitable flammable solvent, and incinerate where permitted under appropriate Federal, State and Local regulations. High water content may dampen flame. Dispose in accordance with all applicable Federal, State and Local environmental regulations. Empty containers should be recycled or disposed of through an approved waste management facility.

SECTION 8

EXPOSURE CONTROLS

<u>Component</u>	<u>Exposure Limits</u>	<u>Skin</u>	<u>Form</u>
Glutaraldehyde	0.05ppm CEILING ACGIH		activated or unactivated
	0.2 ppm CEILING OSHA-Vacated		
	0.8 mg/m3 CEILING OSHA-Vacated		
	0.1 ppm CEILING Interim IHG		
Methanol	200 ppm TWA8 ACGIH	Yes	
	250 ppm STEL ACGIH	Yes	
	200 ppm TWA8 OSHA-Vacated	Yes	
	260 mg/m3 TWA8 OSHA-Vacated	Yes	
	250 ppm STEL OSHA-Vacated	Yes	
	325 mg/m3 STEL OSHA-Vacated	Yes	
	200 ppm TWA8 OSHA		
	260 mg/m3 TWA8 OSHA		

In the Exposure Limits chart above, if there is no specific qualifier (i.e., Aerosol) listed in the Form Column for a particular limit, the listed limit includes all airborne forms of the substance that can be inhaled.

A "yes" in the Skin Column indicates a potential significant contribution to overall exposure by the cutaneous (skin) route, including mucous membranes and the eyes, either by contact with vapors or by direct skin contact with the substance. A "blank" in the Skin column indicates that exposure by the cutaneous (skin) route is not a potential significant contributor to overall exposure.

SECTION 9**PHYSICAL AND CHEMICAL PROPERTIES**

Vapor Pressure:	0.20 mmHg 20 °C Based on glutaraldehyde
Boiling Point (760 mmHg):	~ 100.5 °C ~ 213 °F As product
Vapor Density (air=1):	0.8
Specific Gravity (H2O=1):	1.053 20 °C / 20 °C
Freezing Point:	-4 °C 24 °F
Melting Point:	N/A
Solubility in Water(by weight):	100% 20 °C
pH:	3.1 – 4.5
Evaporation Rate (Butly Acetate=1):	0.9

SECTION 10**STABILITY AND REACTIVITY**

Conditions to Avoid:	Avoid high temperatures (above 100 °C) and evaporation of water.
Incompatible Materials:	Strong alkalis and acids catalyze an aldol-type condensation (exothermic, but not expected to be violent)
Hazardous Polymerization:	Will not occur
Inhibitors/Stabilizers:	N/A

SECTION 11**TRANSPORT INFORMATION**

U.S. D. O. T.:	Not regulated
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SECTION 12**ADDITIONAL INFORMATION**

Additional Information:	Although the information and recommendations set forth herein (Hereinafter "information") are presented in good faith and believed to be correct as of the date thereof Alpharma makes no representations as to the completeness or accuracy thereof. Information is supplied upon the condition that the persons receiving it will make their own determination as to its suitability for their purposes prior to use. In no event will Alpharma be responsible for damages of any nature whatsoever resulting from the use of or reliance upon Information. No representations or warranties, either express or implied, of merchantability, fitness for a particular purpose or of any other nature are made hereunder with respect to Information or the product to which Information refers.
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