

MATERIAL SAFETY DATA SHEET
CHEMICAL IDENTITY

Glutaraldehyde solution

1. IDENTIFICATION OF THE SUBSTANCE OR MIXTURE AND OF THE SUPPLIER

PRODUCT NAME: As a component of below kits;
 Peptides immobilizing kit (BCL-PIK-01)

PRODUCT CODE: BCL-CRS-01

CHEMICAL IDENTIFICATION: Glutaraldehyde

CONTENT IN THE PRODUCT: below 3 %

RECOMMENDED USE: Peptide immobilization onto microplates

MANUFACTURER : Beacle Inc.

SUPPLIER : Beacle Inc.

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(THE BELOW DESCRIPTION IS BASICALLY APPLIED TO 10% GLUTARALDEHYDE SOLUTION)

2. HAZARDS IDENTIFICATION

GSH CLASSIFICATION: Acute toxicity - Oral Category 4
 Acute toxicity - Inhalation (Dusts/Mists) Category 2
 Skin corrosion/irritation Category 1 A
 Serious eye damage/eye irritation Category 1
 Respiratory sensitization Category 1
 Skin sensitization Category 1
 Specific target organ toxicity (single exposure) Category 1
 Category 1 central nervous system
 Specific target organ toxicity (repeated exposure) Category 1
 Category 1 Respiratory tract
 Aquatic environment (acute hazard) Category 2

HAZARD SYMBOL :


HAZARD STATEMENTS : H302 - Harmful if swallowed
 H314 - Causes severe skin burns and eye damage
 H317 - May cause an allergic skin reaction
 H318 - Causes serious eye damage
 H330 - Fatal if inhaled

PRECAUTIONARY STATEMENTS : Avoid breathing dust/fume/gas/mist/vapours/spray.
 Avoid release to the environment.
 Wear protective gloves/eye protection/face protection.
 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
 If experiencing respiratory symptoms: Call a POISON CENTER or doctor/physician.

3. COMPOSITION/INFORMATION ON INGREDIENTS

CHEMICAL IDENTITY : Glutaraldehyde 2%

FORMULA : HOCCH₂CH₂CH₂CHO

MOLECULAR WEIGHT : 100.12

CAS NUMBER : 111-30-8

4. FIRST AID MEASURES

GENERAL ADVICE : Wash off immediately with soap and plenty of water. In the case of respirable dust and/or fumes, use self-contained breathing apparatus and dust impervious protective suit. Use personal protective

INHALATION : If breathed in, move person into fresh air. If not breathing, give artificial respiration. If irritation persists, consult a physician.

SKIN CONTACT : Remove contaminated clothes and shoes, rinse skin with plenty of water or shower. Use soap to help assure removal. If irritation persists, transport to a hospital immediately

EYE CONTACT : Remove any contact lenses at once. Flush eyes well with flooding amounts of running water for at least 15 minutes. Assure adequate flushing by separating the eyelids with sterile fingers. If irritation persists, transport to a hospital immediately

INGESTION : Rinse mouth, give plenty of water to dilute the substance. Never give anything by mouth to an unconscious person. Transport to a hospital immediately

5. FIRE FIGHTING MEASURES

EXTINGUISHING MEDIA : Suitable extinguishing media
 Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide

Special hazards arising from the substance or mixture : Carbon oxides

SPECIAL PROTECTIVE EQUIPMENT FOR FIREFIGHTERS :	Wear self-contained breathing apparatus for firefighting if necessary.
6. ACCIDENTAL RELEASE MEASURES	
PERSONAL PRECAUTIONS :	Use personal protective equipment. Avoid breathing vapours, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas. For personal protection see section 8.
ENVIRONMENTAL PRECAUTIONS :	Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided
METHODS FOR CLEANING UP :	Soak up with inert absorbent material and dispose of as hazardous waste. Keep in suitable, closed containers for disposal.
7. HANDLING AND STORAGE	
PRECAUTION FOR SAFE HANDLING :	Avoid contact with skin and eyes. Avoid inhalation of vapour or mist. For precautions see section 2.2
CONDITIONS FOR SAFE STORAGE :	Store in cool place. Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage. Recommended storage temperature -20 °C Store under inert gas. Air sensitive. Storage class (TRGS 510): Non-combustible, corrosive hazardous materials
8. EXPOSURE CONTROLS/PERSONAL PROTECTION	
ENGINEERING MEASURES :	se exhaust ventilation to keep airborne concentrations below exposure limits. Use only with adequate
INDIVIDUAL PROTECTION MEASURES ;	
Respiratory protection :	Where risk assessment shows air-purifying respirators are appropriate use a full-face respirator with multi-purpose combination (US) or type ABEK (EN 14387) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as Complete suit protecting against chemicals, The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.
Body Protection	Tightly fitting safety goggles. Faceshield (8-inch minimum). Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).
Eye protection :	Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands. The selected protective gloves have to satisfy the specifications of EU Directive 89/686/EEC and the standard EN 374 derived from it.
Skin protection :	Components with workplace control parameters
CONTROL PARAMETER :	
9. PHYSICAL AND CHEMICAL PROPERTIES	
APPEARANCE :	Form: liquid Colour: colourless
ODOUR :	no data available
pH :	2,9
MELTING POINT :	no data available
INITIAL BOILING POINT :	no data available
FLASH POINT :	no data available
FLAMMABILITY (solid, gas) :	no data available
EXPLOSIVE LIMITS :	no data available
VAPOR PRESSURE :	0,0203 hPa at 20 °C
SPECIFIC GRAVITY :	1,061 g/cm ³
WATER SOLUBILITY:	no data available
PARTITION COEFFICIENT :	no data available
AUTOIGNITION TEMPERATURE :	no data available
DECOMPOSITION TEMPERATURE :	no data available
OXIDATIVE PROPERTY	no data available
EXPLOSIVE PROPERTY	no data available
10. STABILITY AND REACTIVITY	
CHEMICAL STABILITY :	May be altered by light
POSSIBILITY OF HAZARDOUS CONDITIONS TO AVOID :	Generates a toxic chlorine gas when mixed with acid Extremes of temperature and direct sunlight
INCOMPATIBLE MATERIALS :	Strong oxidizing agents
HAZARDOUS DECOMPOSITION	Carbon monoxide (CO), carbon dioxide (CO ₂)
11. TOXICOLOGICAL INFORMATION	
ACUTE TOXICITY(oral/dermal/inhalation) :	Oral LD50 252 mg/kg (Rat) Dermal LD50 560µ L/kg (Rabbit) Inhalation LC50 0.1 mg/l (Rat) 4 h
SKIN CORROSION/IRRITATION :	Skin-Rabbit(Glutaral) Result: Causes burns.(OECD Test Guideline 404)
EYE DAMAGE/EYE IRRITATION :	Eyes-Rabbit(Glutaral) Result: Severe eye irritation-24 h
RESPIRATORY OR SKIN SENSITIZATION :	May cause allergic respiratory and skin reactions Chronic exposure may cause dermatitis. largely based on human evidence (Glutaral) Classified according to Regulation (EU) 1272/2008, Annex VI (Table 3.1/3.2)(Glutaral)
GERM CELL MUTAGENICITY :	no data available
TOXIC TO REPRODUCTION :	no data available

CARCINOGENICITY : This product is or contains a component that is not classifiable as to its carcinogenicity based on its IARC, ACGIH, NTP, or EPA classification.(Glutaral)
(Glutaral) IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC

ADDITIONAL INFORMATION ;
RTECS: not available

12. ECOLOGICAL INFORMATION

ECOTOXICITY : Toxicity to fish LC50-Oncorhynchus mykiss (rainbow trout)-3,5 mg/l-96,0 h (Glutaral)
Toxicity to daphnia and other aquatic invertebrates EC50-Daphnia magna (Water flea)-0,75 mg/l-48 h (Glutaral)
Toxicity to algae EC50-Desmodesmus subspicatus (green algae)-0,61 mg/l-72 h (Glutaral)

PERSISTENCE AND DEGRADABILITY : Biotic/Aerobic-Exposure time 28 d (Glutaral) Result: 90 -100 %-Readily biodegradable

BIOACCUMULATION POTENTIAL : no data available

MOBILITY IN SOIL : no data available

OTHER ADVERSE EFFECTS : no data available

13. DISPOSAL CONSIDERATION (INCLUDING CONTAINER)

Product Offer surplus and non-recyclable solutions to a licensed disposal company.
Contaminated packaging Dispose of as unused product.

14. TRANSPORT INFORMATION

UN NUMBER : ADR/RID: 2922
IMDG: 2922
IATA: 2922

UN PROPER SHIPPING NAME : ADR/RID: Corrosive liquid, toxic, n.o.s
IMDG: Corrosive liquid, toxic, n.o.s
IATA: Corrosive liquid, toxic, n.o.s

CLASS or DIVISION : ADR/RID: 8
IMDG: 8
IATA: 8

PACKING GROUP : ADR/RID: III
IMDG: III
IATA: III

ENVIRONMENTAL HAZARDS : ADR/RID: yes
IMDG Marine pollutant:yes
IATA: no

15. REGULATORY INFORMATION

US REGULATIONS ;
EU REGULATIONS:
This safety datasheet complies with the requirements of Regulation (EC) No. 1907/2006
Safety, health and environmental regulations/legislation specific for the substance or mixture
no data available
Chemical Safety Assessment
For this product a chemical safety assessment was not carried out

16. OTHER INFORMATION INCLUDING INFORMATION ON PREPARATION AND REVISION OF THE SDS

No specific notes

The information described above is believed to be correct to be the best of our knowledge and information but does not purport to be all inclusive and shall be used only as a guide. The product should be used by expert persons having knowledge and skill with their own risk. Beacle shall not be held liable for any damage resulting from handling or from contact with the above material.