

Safety Data Sheet

acc. to OSHA HCS

Printing date 01/09/2024

Reviewed on 01/09/2024

1 Identification

- **Product identifier**
- **Trade name:** 3-Chloro-1,2-propanediol, 99%
- **Article number:** C3780
- **CAS Number:**
96-24-2
- **EC number:**
202-492-4
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**
Aqua Solutions, Inc.
6913 Highway 225
DEER PARK, TX 77536
USA
800-256-2586
- **Information department:**
Technical Coordinator
Sherman Nelson shermann@aquasolutions.org
- **Emergency telephone number:**
Chemtec: 800-424-9300
Canutec: 613-996-6666



2 Hazard(s) identification

- **Classification of the substance or mixture**



GHS06 Skull and crossbones

Acute Toxicity - Oral 3

H301 Toxic if swallowed.

Acute Toxicity - Inhalation 2

H330 Fatal if inhaled.



GHS08 Health hazard

Carcinogenicity 2

H351 Suspected of causing cancer.

Toxic to Reproduction 1B

H360 May damage fertility or the unborn child.

Specific Target Organ Toxicity - Single Exposure 1

H370 Causes damage to organs.

Specific Target Organ Toxicity - Repeated Exposure 1

H372 Causes damage to organs through prolonged or repeated exposure.



GHS05 Corrosion

Corrosive to Metals 1

H290 May be corrosive to metals.

Eye Damage 1

H318 Causes serious eye damage.



GHS07

Skin Irritation 2

H315 Causes skin irritation.

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· **Label elements**

· **GHS label elements** The substance is classified and labeled according to the Globally Harmonized System (GHS).

· **Hazard pictograms**



GHS05 GHS06 GHS08

· **Signal word** *Danger*

· **Hazard statements**

May be corrosive to metals.

Toxic if swallowed.

Fatal if inhaled.

Causes skin irritation.

Causes serious eye damage.

Suspected of causing cancer.

May damage fertility or the unborn child.

Causes damage to organs.

Causes damage to organs through prolonged or repeated exposure.

· **Precautionary statements**

Obtain special instructions before use.

Do not handle until all safety precautions have been read and understood.

Keep only in original container.

Do not breathe dust/fume/gas/mist/vapors/spray.

Wash thoroughly after handling.

Do not eat, drink or smoke when using this product.

Use only outdoors or in a well-ventilated area.

Wear protective gloves/protective clothing/eye protection/face protection.

[In case of inadequate ventilation] wear respiratory protection.

If swallowed: Immediately call a poison center/doctor.

Rinse mouth.

If on skin: Wash with plenty of water.

IF INHALED: Remove person to fresh air and keep comfortable for breathing.

If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do.

Continue rinsing.

IF exposed or concerned: Get medical advice/attention.

Get medical advice/attention if you feel unwell.

Specific treatment is urgent (see on this label).

Take off contaminated clothing and wash it before reuse.

If skin irritation occurs: Get medical advice/attention.

Absorb spillage to prevent material damage.

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

Store locked up.

Store in corrosive resistant container with a resistant inner liner.

Dispose of contents/container in accordance with local/regional/national/international regulations.

· **Classification system:**

· **NFPA ratings (scale 0 - 4)**



Health = 3

Fire = 1

Reactivity = 0

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- **HMIS-ratings (scale 0 - 4)**

HEALTH	3	Health = *3
FIRE	1	Fire = 1
REACTIVITY	0	Reactivity = 0

- **Other hazards**
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.

3 Composition/information on ingredients

- **Chemical characterization: Substances**
- **CAS No. Description**
CAS: 96-24-2 chlorohydrin
- **Identification number(s)**
- **EC number:** 202-492-4

4 First-aid measures

- **Description of first aid measures**
- **General information:**
Immediately remove any clothing soiled by the product.
Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.
Remove breathing apparatus only after contaminated clothing have been completely removed.
In case of irregular breathing or respiratory arrest provide artificial respiration.
- **After inhalation:**
Supply fresh air or oxygen; call for doctor.
In case of unconsciousness place patient stably in side position for transportation.
- **After skin contact:** Immediately wash with water and soap and rinse thoroughly.
- **After eye contact:** Rinse opened eye for several minutes under running water. Then consult a doctor.
- **After swallowing:** Do not induce vomiting; immediately call for medical help.
- **Information for doctor:**
· **Most important symptoms and effects, both acute and delayed** No further relevant information available.
· **Indication of any immediate medical attention and special treatment needed**
No further relevant information available.

5 Fire-fighting measures

- **Extinguishing media**
- **Suitable extinguishing agents:** Use fire fighting measures that suit the environment.
- **Special hazards arising from the substance or mixture** No further relevant information available.
- **Advice for firefighters**
- **Protective equipment:** Mouth respiratory protective device.

6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures**
Wear protective equipment. Keep unprotected persons away.

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- **Environmental precautions:**
 - Dilute with plenty of water.*
 - Do not allow to enter sewers/ surface or ground water.*
- **Methods and material for containment and cleaning up:**
 - Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).*
 - Use neutralizing agent.*
 - Dispose contaminated material as waste according to section 13.*
 - Ensure adequate ventilation.*
- **Reference to other sections**
 - See Section 7 for information on safe handling.*
 - See Section 8 for information on personal protection equipment.*
 - See Section 13 for disposal information.*
- **Protective Action Criteria for Chemicals**
 - **PAC-1:** 0.011 ppm
 - **PAC-2:** 0.12 ppm
 - **PAC-3:** 5.4 ppm

7 Handling and storage

- **Handling:**
- **Precautions for safe handling**
 - Ensure good ventilation/exhaustion at the workplace.*
 - Open and handle receptacle with care.*
- **Information about protection against explosions and fires:** *Keep respiratory protective device available.*
- **Conditions for safe storage, including any incompatibilities**
- **Storage:**
 - Requirements to be met by storerooms and receptacles: No special requirements.*
 - Information about storage in one common storage facility: Not required.*
 - Further information about storage conditions: Keep receptacle tightly sealed.*
 - Specific end use(s) No further relevant information available.*

8 Exposure controls/personal protection

- **Additional information about design of technical systems:** *No further data; see section 7.*
- **Control parameters**
- **Components with limit values that require monitoring at the workplace:** *Not required.*
- **Additional information:** *The lists that were valid during the creation were used as basis.*
- **Exposure controls**
- **Personal protective equipment:**
- **General protective and hygienic measures:**
 - Keep away from foodstuffs, beverages and feed.*
 - Immediately remove all soiled and contaminated clothing.*
 - Wash hands before breaks and at the end of work.*
 - Store protective clothing separately.*
 - Avoid contact with the skin.*
 - Avoid contact with the eyes and skin.*
- **Breathing equipment:**
 - 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.*

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· **Protection of hands:**



Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

· **Material of gloves**

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer.

· **Penetration time of glove material**

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

· **Eye protection:**



Tightly sealed goggles

· **Body protection:** Protective work clothing

9 Physical and chemical properties

· **Information on basic physical and chemical properties**

· **General Information**

· **Appearance:**

Form:	Liquid
Color:	Light yellow
Odor:	Not available
Odor threshold:	Not determined.

· **pH-value:** Not determined.

· **Change in condition**

Melting point/Melting range:	-40 °C
Boiling point/Boiling range:	213 °C (415.4 °F)

· **Flash point:** 135 °C (275 °F)

· **Flammability (solid, gaseous):** Not applicable.

· **Decomposition temperature:** Not determined.

· **Ignition temperature:** Not determined.

· **Danger of explosion:** Product does not present an explosion hazard.

· **Explosion limits:**

Lower:	Not determined.
Upper:	Not determined.

· **Vapor pressure:** Not determined.

· **Density at 20 °C (68 °F):** 1.322 g/cm³ (11.03209 lbs/gal)

· **Relative density** Not determined.

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- | | |
|--|--|
| · Vapor density | Not determined. |
| · Evaporation rate | Not determined. |
| · Solubility in / Miscibility with Water: | Fully miscible. |
| · Partition coefficient (n-octanol/water): | Not determined. |
| · Viscosity: | |
| Dynamic: | Not determined. |
| Kinematic: | Not determined. |
| · Other information | No further relevant information available. |

10 Stability and reactivity

- **Reactivity** No further relevant information available.
- **Chemical stability**
- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **Possibility of hazardous reactions** No dangerous reactions known.
- **Conditions to avoid** No further relevant information available.
- **Incompatible materials:** No further relevant information available.
- **Hazardous decomposition products:** No dangerous decomposition products known.

11 Toxicological information

- **Information on toxicological effects**
- **Acute toxicity:**

· **LD/LC50 values that are relevant for classification:**

Oral	LD50	26 mg/kg (rat)
Inhalative	LC50/4h	88 mg/l (rat)

- **Primary irritant effect:**
- **on the skin:** Irritant to skin and mucous membranes.
- **on the eye:** Strong irritant with the danger of severe eye injury.
- **Sensitization:** No sensitizing effects known.
- **Additional toxicological information:**
- **Carcinogenic categories**
- **IARC (International Agency for Research on Cancer) 2B**
- **NTP (National Toxicology Program) Substance is not listed.**
- **OSHA-Ca (Occupational Safety & Health Administration) Substance is not listed.**

12 Ecological information

- **Toxicity**
- **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.

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- **Additional ecological information:**
- **General notes:**
*Water hazard class 3 (Assessment by list): extremely hazardous for water
 Do not allow product to reach ground water, water course or sewage system, even in small quantities.
 Must not reach bodies of water or drainage ditch undiluted or unneutralized.
 Danger to drinking water if even extremely small quantities leak into the ground.*
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **Other adverse effects** No further relevant information available.

13 Disposal considerations

- **Waste treatment methods**
- **Recommendation:**
Must not be disposed of together with household garbage. Do not allow product to reach sewage system.
- **Uncleaned packagings:**
- **Recommendation:** Disposal must be made according to official regulations.
- **Recommended cleansing agent:** Water, if necessary with cleansing agents.

14 Transport information

· UN-Number	
· DOT, IMDG, IATA	UN2689
· UN proper shipping name	
· DOT	Glycerol alpha-monochlorohydrin
· IMDG, IATA	GLYCEROL alpha-MONOCHLOROXYDRIN
· Transport hazard class(es)	
· DOT	
	
· Class	6.1 Toxic substances
· Label	6.1
· IMDG, IATA	
	
· Class	6.1 Toxic substances
· Label	6.1
· Packing group	
· DOT, IMDG, IATA	III
· Environmental hazards:	Not applicable.
· Special precautions for user	Warning: Toxic substances

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· Hazard identification number (Kemler code): 60	
· EMS Number:	F-A,S-A
· Stowage Category	A
· Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code	Not applicable.
· Transport/Additional information:	
· DOT	
· Quantity limitations	On passenger aircraft/rail: 60 L On cargo aircraft only: 220 L
· IMDG	
· Limited quantities (LQ)	5L
· Excepted quantities (EQ)	Code: E1 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 1000 ml
· UN "Model Regulation":	UN 2689 GLYCEROL ALPHA-MONOCHLOROHYDRIN, 6.1, III

15 Regulatory information

- **Safety, health and environmental regulations/legislation specific for the substance or mixture**
No further relevant information available.
- **Sara**
- **Section 355 (extremely hazardous substances):** Substance is not listed.
- **Section 313 (Specific toxic chemical listings):** Substance is not listed.
- **TSCA (Toxic Substances Control Act):** ACTIVE
- **Hazardous Air Pollutants** Substance is not listed.
- **Proposition 65**
- **Chemicals known to cause cancer:** Substance is listed.
- **Chemicals known to cause reproductive toxicity for females:** Substance is not listed.
- **Chemicals known to cause reproductive toxicity for males:** Substance is not listed.
- **Chemicals known to cause developmental toxicity:** Substance is not listed.
- **Carcinogenic categories**
- **EPA (Environmental Protection Agency)** Substance is not listed.
- **TLV (Threshold Limit Value)** Substance is not listed.
- **NIOSH-Ca (National Institute for Occupational Safety and Health)** Substance is not listed.
- **GHS label elements** The substance is classified and labeled according to the Globally Harmonized System (GHS).
- **Hazard pictograms**



GHS05 GHS06 GHS08

- **Signal word** Danger
- **Hazard statements**
May be corrosive to metals.
Toxic if swallowed.
Fatal if inhaled.
Causes skin irritation.
Causes serious eye damage.

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Suspected of causing cancer.

May damage fertility or the unborn child.

Causes damage to organs.

Causes damage to organs through prolonged or repeated exposure.

· **Precautionary statements**

Obtain special instructions before use.

Do not handle until all safety precautions have been read and understood.

Keep only in original container.

Do not breathe dust/fume/gas/mist/vapors/spray.

Wash thoroughly after handling.

Do not eat, drink or smoke when using this product.

Use only outdoors or in a well-ventilated area.

Wear protective gloves/protective clothing/eye protection/face protection.

[In case of inadequate ventilation] wear respiratory protection.

If swallowed: Immediately call a poison center/doctor.

Rinse mouth.

If on skin: Wash with plenty of water.

IF INHALED: Remove person to fresh air and keep comfortable for breathing.

If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do.

Continue rinsing.

IF exposed or concerned: Get medical advice/attention.

Get medical advice/attention if you feel unwell.

Specific treatment is urgent (see on this label).

Take off contaminated clothing and wash it before reuse.

If skin irritation occurs: Get medical advice/attention.

Absorb spillage to prevent material damage.

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

Store locked up.

Store in corrosive resistant container with a resistant inner liner.

Dispose of contents/container in accordance with local/regional/national/international regulations.

· **Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

· **Department issuing SDS:** Environment protection department.

· **Contact:**

Date of Preparation / Last Revision:

· **Date of preparation / last revision**

Revision 0.0: 01-09-2024 : creation date for SDS STN/CMC

01/09/2024

· **Abbreviations and acronyms:**

IMDG: International Maritime Code for Dangerous Goods

DOT: US Department of Transportation

IATA: International Air Transport Association

EINECS: European Inventory of Existing Commercial Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

NFPA: National Fire Protection Association (USA)

HMIS: Hazardous Materials Identification System (USA)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

NIOSH: National Institute for Occupational Safety

OSHA: Occupational Safety & Health

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*TLV: Threshold Limit Value**PEL: Permissible Exposure Limit**REL: Recommended Exposure Limit**Corrosive to Metals 1: Corrosive to metals – Category 1**Acute Toxicity - Oral 3: Acute toxicity – Category 3**Acute Toxicity - Inhalation 2: Acute toxicity – Category 2**Skin Irritation 2: Skin corrosion/irritation – Category 2**Eye Damage 1: Serious eye damage/eye irritation – Category 1**Carcinogenicity 2: Carcinogenicity – Category 2**Toxic to Reproduction 1B: Reproductive toxicity – Category 1B**Specific Target Organ Toxicity - Single Exposure 1: Specific target organ toxicity (single exposure) – Category 1**Specific Target Organ Toxicity - Repeated Exposure 1: Specific target organ toxicity (repeated exposure) – Category 1*

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