

# Glyoxylic Acid Solution

## Safety Data Sheet

### Section 1: Identification

#### 1.1 Identification

Product Name : Glyoxylic Acid Solution  
Product Code : ELNP-RA1A-100A-01

#### 1.2 Relevant identified uses of the substance or mixture and uses advised against

Use of the substance/mixture : For laboratory and industrial use only

#### 1.3 Details of the supplier of the safety data sheet

Nano3D Systems LLC  
1110 N.E. Circle Blvd.  
Building 11/ATAMI  
Corvallis, OR 97330

#### 1.4 Emergency telephone number

Emergency number : 1-800-424-9300

### Section 2: Hazard(s) identification

#### 2.1 Classification of the substance or mixture

##### Classification (GHS-US)

Corrosive to metals : (Category 1), H290  
Serious eye damage : (Category 1), H318  
Skin sensitisation : (Category 1), H317  
Acute aquatic toxicity : (Category 3), H402

#### 2.2 Label elements

##### GHS-US labeling

Hazard pictogram (GHS-US)



Signal word (GHS-US) : Danger

Hazard statements (GHS-US) : H290 May be corrosive to metals  
: H317 May cause an allergic skin reaction.  
: H318 Causes serious eye damage  
: H402 Harmful to aquatic life

Precautionary statements (GHS-US) : P234 Keep only in original container  
: P261 Avoid breathing dust/ fume/ gas/ mist/ vapors/  
spray.  
: P264 Wash skin thoroughly after handling.  
: P273 Avoid release to the environment.

# Glyoxylic Acid Solution

## Safety Data Sheet

- : P280 Wear protective gloves/ eye protection/ face protection
- : P302 + P352 IF ON SKIN: Wash with plenty of soap and water
- : P305 + P351 + P338 + P310 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER/doctor.
- : P333 + P313 If skin irritation or rash occurs: Get medical advice/ attention.
- : P363 Wash contaminated clothing before reuse
- : P390 Absorb spillage to prevent material damage
- : P406 Store in corrosive resistant stainless steel container with a resistant inner liner.
- : P501 Dispose of contents/ container to an approved waste disposal plant.

### 2.3 Other Hazards

None

### 2.4 Unknown acute toxicity (GHS US)

No additional information available

## Section 3: Composition/information on ingredients

### 3.1 Substance

Not applicable

### 3.2 Mixture

Name	Product Identifier	%	Classification (GHS-US)
Glyoxylic acid	CAS-No. 298-12-4 EC-No. 206-058-5	> 10 - < 70%	Met. Corr. 1; Eye Dam. 1; Skin Sens. 1; Aquatic Acute 3; H290, H317, H318, H402

## Section 4: First Aid Measures

### 4.1 Description of first aid measures

General

: Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area

Inhalation

: If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

# Glyoxylic Acid Solution

## Safety Data Sheet

Skin contact	: Take off contaminated clothing and shoes immediately. Wash off with soap and plenty of water. Take victim immediately to hospital. Consult a physician.
Eye contact	: Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician. Continue rinsing eyes during transport to hospital.
Ingestion	: Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician

### 4.2 Most important symptoms and effects, both acute and delayed

Inhalation	: See section 2.2 or section 11
Skin contact	: See section 2.2 or section 11
Eye contact	: See section 2.2 or section 11
Ingestion	: See section 2.2 or section 11

### 4.3 Indication of any immediate medical attention and special treatment needed

No further information available

## Section 5: Firefighting measures

### 5.1 Extinguishing media

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

Unsuitable extinguishing media : No data available

### 5.2 Special hazards arising from the substance or mixture

No data available

### 5.3 Advice for firefighters

Protection during firefighting : Wear self-contained breathing apparatus for firefighting if necessary.

## Section 6: Accidental release measures

# Glyoxylic Acid Solution

## Safety Data Sheet

### 6.1 Personal precautions, protective equipment and emergency procedures

6.1.1 For non-emergency personnel : Use personal protective equipment. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas.

6.1.2 For emergency personnel : No additional information available

### 6.2 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.

### 6.3 Methods and materials for containment and cleaning up

Soak up with inert absorbent materials and dispose of as hazardous waste. Keep in suitable, closed containers for disposal.

### 6.4 Reference to other sections

For disposal see section 13.

## Section 7: Handling and storage

### 7.1 Precautions for safe handling

Precautions for safe handling : Avoid contact with skin and eyes. Avoid inhalation of vapor or mist. The potential for combustible dust formation should be taken into consideration before additional processing.

### 7.2 Conditions for safe storage, including any incompatibilities

Storage conditions : 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.

## Section 8: Exposure controls/personal protection

### 8.1 Control parameters

#### Glyoxylic acid

Contains no substances with occupational exposure limit values.

### 8.2 Exposure controls

Appropriate engineering controls : Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

# Glyoxylic Acid Solution

## Safety Data Sheet

### Hand 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.

### Eye/face 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).

### Skin and body protection

: 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.

### Respiratory protection

: Where risk assessment shows air-purifying respirator are appropriate use a full face respirator with multipurpose combination (US) or 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 NIOSH (US) or CEN (EU).

## Section 9: Physical and chemical properties

### 9.1 Information on basic physical and chemical properties

Physical state	: Liquid
Color	: Colorless
Odor	: No information available
Odor threshold	: No information available
pH	: No information available
Melting point	: No information available
Freezing point	: No information available
Boiling point	: No information available
Flash point	: No information available
Relative evaporation rate (butyl acetate = 1)	: No information available
Flammability (solid, gas)	: No information available
Explosion limits	: No information available

# Glyoxylic Acid Solution

## Safety Data Sheet

Explosive properties	: No information available
Vapor pressure	: No information available
Relative density	: No information available
Relative density at 20 °C	: No information available
Water Solubility	: Miscible
Log Pow	: No information available
Auto-ignition temperature	: No information available
Viscosity	: No information available
Viscosity, kinematic	: No information available
Viscosity, dynamic	: No information available

## 9.2 Other information

No further information available

## Section 10: Stability and reactivity

### 10.1 Reactivity

No information available

### 10.2 Chemical Stability

Stable under recommended storage conditions.

### 10.3 Possibility of hazardous reactions

No data available

### 10.4 Conditions to avoid

Exposure to moisture

### 10.5 Incompatible materials

No data available

### 10.6 Hazardous decomposition products

Hazardous decomposition products formed under fire conditions. – Carbon oxides

Other decomposition products – none

## Section 11: Toxicological information

### 11.1 Control parameters

Acute toxicity

### Glyoxylic acid

No information available

# Glyoxylic Acid Solution

## Safety Data Sheet

Skin corrosion/irritation	: Causes severe burns
Serious eye damage/irritation	: No information available
Respiratory or skin sensitization	: No information available
Germ cell mutagenicity	: No information available
Carcinogenicity	: 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, NTP or OSHA.
Reproductive toxicity	: No information available.
Specific target organ toxicity (single exposure)	: No information available.
Specific target organ toxicity (repeated exposure)	: No information available.
Aspiration hazard	: No information available.

### Additional information

RTECS: Not available

Material is extremely destructive to tissue of the mucous membranes and upper respiratory tract, eyes, and skin., spasm, inflammation and edema of the larynx, spasm, inflammation and edema of the bronchi, Symptoms of exposure may include burning sensation, coughing, wheezing, laryngitis, shortness of breath, headache, nausea, and vomiting., pulmonary edema, To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

## Section 12: Ecological information

### 12.1 Toxicity

#### Glyoxylic acid

No information available

### 12.2 Persistence and degradability

#### Glyoxylic acid

No information available

### 12.3 Bioaccumulative potential

# Glyoxylic Acid Solution

## Safety Data Sheet

### Glyoxylic acid

No data available

### 12.4 Mobility in soil

### Glyoxylic acid

No data available

### 12.4 Other adverse effects

An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.  
Harmful to aquatic life.

## Section 13: Disposal considerations

### 13.1 Waste treatment methods

#### Product

Burn in a chemical incinerator equipped with an afterburner and scrubber. Offer surplus and non-recyclable solutions to a licensed disposal company. Contact a licensed professional waste disposal service to dispose of this material.

#### Contaminated packaging

Dispose of as unused product.

## Section 14: Transportation information

### 14.1 Transportation information

#### Department of Transportation (DOT)

UN number: 3265 Class: 8 Packing group: III  
Proper shipping name: Corrosive liquid, acidic, organic n.o.s.  
Reportable Quantity (RQ):

#### IMDG

UN number: 3265 Class: 8 Packing group: III EMS-No: F-A, S-B  
Proper shipping name: CORROSIVE LIQUID, ACIDIC, ORGANIC, N.O.S. (Glyoxylic acid)

#### IATA

UN number: 3265 Class: 8 Packing group: III  
Proper shipping name: Corrosive liquid, acidic, organic n.o.s. (Glyoxylic acid)



# Glyoxylic Acid Solution

Safety Data Sheet

## Section 15: Regulatory information

### 15.1 US Federal regulations

#### Glyoxylic acid

SARA Title III, Sections 311, 312

### 15.2 US State regulations

#### Glyoxylic acid

Pennsylvania Right To Know

New Jersey Right To Know

## Section 16: Other information

#### HMIS Rating

Health	3
Chronic Health	*
Flammability	0
Physical	0

#### NFPA Rating

Health	3
Fire	0
Reactivity	0

SDS Preparation date: January 10, 2018      Supersedes previous version: New SDS.

This SDS contains revisions in the following section(s): Not applicable. New SDS.

The information contained herein is accurate to the best of our knowledge. NANO3D SYSTEMS LLC makes no warranty of any kind, express or implied, concerning the safe use of this material in any process or in combination with other substances.

End of Safety Data Sheet