

## SAFETY DATA SHEET

Version 8.5  
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**SECTION 1: Identification of the substance/mixture and of the company/undertaking****1.1 Product identifiers**

Product name : Glycolic acid for analysis EMSURE® Reag. Ph Eur

Product Number : 1.04106  
Catalogue No. : 104106  
Brand : Millipore  
CAS-No. : 79-14-1

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

Identified uses : Reagent for analysis

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

Company : SIGMA-ALDRICH CANADA LTD.  
2149 WINSTON PARK DRIVE  
OAKVILLE ON L6H 6J8  
CANADA

Telephone : +1 905 829-9500  
Fax : +1 905 829-9292

**1.4 Emergency telephone**

Emergency Phone # : 800-424-9300 CHEMTREC (USA)  
+1-703-527-3887 CHEMTREC  
(International)  
24 Hours/day; 7 Days/week

**SECTION 2: Hazards identification****2.1 Classification of the substance or mixture****GHS Classification in accordance with Hazardous Products Regulations (HPR) (SOR/2015-17)**

Acute toxicity, Inhalation (Category 4), H332  
Skin corrosion (Category 1B), H314  
Serious eye damage (Category 1), H318  
Short-term (acute) aquatic hazard (Category 3), H402

For the full text of the H-Statements mentioned in this Section, see Section 16.

**2.2 GHS Label elements, including precautionary statements**

Pictogram



Signal word	Danger
Hazard statement(s)	
H314	Causes severe skin burns and eye damage.
H332	Harmful if inhaled.
H402	Harmful to aquatic life.
Precautionary statement(s)	
P260	Do not breathe dusts or mists.
P264	Wash skin thoroughly after handling.
P271	Use only outdoors or in a well-ventilated area.
P273	Avoid release to the environment.
P280	Wear protective gloves/ protective clothing/ eye protection/ face protection.
P301 + P330 + P331	IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
P303 + P361 + P353	IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water.
P304 + P340 + P310	IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER/ doctor.
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.
P363	Wash contaminated clothing before reuse.
P405	Store locked up.
P501	Dispose of contents/ container to an approved waste disposal plant.

### 2.3 Hazards not otherwise classified (HNOC) or not covered by GHS

- none

## SECTION 3: Composition/information on ingredients

### 3.1 Substances

Formula	: C <sub>2</sub> H <sub>4</sub> O <sub>3</sub>
Molecular weight	: 76.05 g/mol
CAS-No.	: 79-14-1
EC-No.	: 201-180-5

Component	Classification	Concentration *
<b>Glycolic acid</b>		
	Acute Tox. 4; Skin Corr. 1B; Eye Dam. 1; Aquatic Acute 3; H332, H314, H318, H402	<= 100 %
* Weight %		

For the full text of the H-Statements mentioned in this Section, see Section 16.

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## SECTION 4: First aid measures

### 4.1 Description of first-aid measures

#### General advice

First aiders need to protect themselves. Show this material safety data sheet to the doctor in attendance.

#### If inhaled

After inhalation: fresh air. Call in physician.

#### In case of skin contact

In case of skin contact: Take off immediately all contaminated clothing. Rinse skin with water/ shower. Call a physician immediately.

#### In case of eye contact

After eye contact: rinse out with plenty of water. Immediately call in ophthalmologist. Remove contact lenses.

#### If swallowed

After swallowing: make victim drink water (two glasses at most), avoid vomiting (risk of perforation). Call a physician immediately. Do not attempt to neutralise.

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

The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11

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

No data available

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## SECTION 5: Firefighting measures

### 5.1 Extinguishing media

#### Suitable extinguishing media

Water Foam Carbon dioxide (CO<sub>2</sub>) Dry powder

#### Unsuitable extinguishing media

For this substance/mixture no limitations of extinguishing agents are given.

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

Carbon oxides

Combustible.

Vapors are heavier than air and may spread along floors.

Forms explosive mixtures with air on intense heating.

Development of hazardous combustion gases or vapours possible in the event of fire.

### 5.3 Advice for firefighters

Stay in danger area only with self-contained breathing apparatus. Prevent skin contact by keeping a safe distance or by wearing suitable protective clothing.

### 5.4 Further information

Prevent fire extinguishing water from contaminating surface water or the ground water system.

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## **SECTION 6: Accidental release measures**

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

Advice for non-emergency personnel: Avoid inhalation of dusts. Avoid substance contact. Ensure adequate ventilation. Evacuate the danger area, observe emergency procedures, consult an expert.

For personal protection see section 8.

### **6.2 Environmental precautions**

Do not let product enter drains.

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

Cover drains. Collect, bind, and pump off spills. Observe possible material restrictions (see sections 7 and 10). Take up dry. Dispose of properly. Clean up affected area. Avoid generation of dusts.

### **6.4 Reference to other sections**

For disposal see section 13.

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## **SECTION 7: Handling and storage**

### **7.1 Precautions for safe handling**

#### **Advice on safe handling**

Work under hood. Do not inhale substance/mixture.

#### **Hygiene measures**

Immediately change contaminated clothing. Apply preventive skin protection. Wash hands and face after working with substance.

For precautions see section 2.2.

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

#### **Storage conditions**

No aluminium, tin, or zinc containers.

Tightly closed. Dry.

Recommended storage temperature see product label.

Storage class (TRGS 510): 8A: Combustible, corrosive hazardous materials

### **7.3 Specific end use(s)**

Apart from the uses mentioned in section 1.2 no other specific uses are stipulated

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## **SECTION 8: Exposure controls/personal protection**

### **8.1 Control parameters**

### **8.2 Exposure controls**

#### **Appropriate engineering controls**

Immediately change contaminated clothing. Apply preventive skin protection. Wash hands and face after working with substance.

## Personal protective equipment

### Eye/face protection

Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU). Tightly fitting safety goggles

### Skin protection

This recommendation applies only to the product stated in the safety data sheet, supplied by us and for the designated use. When dissolving in or mixing with other substances and under conditions deviating from those stated in EN374 please contact the supplier of CE-approved gloves (e.g. KCL GmbH, D-36124 Eichenzell, Internet: [www.kcl.de](http://www.kcl.de)).

Full contact

Material: Nitrile rubber

Minimum layer thickness: 0.11 mm

Break through time: 480 min

Material tested:KCL 741 Dermatril® L

This recommendation applies only to the product stated in the safety data sheet, supplied by us and for the designated use. When dissolving in or mixing with other substances and under conditions deviating from those stated in EN374 please contact the supplier of CE-approved gloves (e.g. KCL GmbH, D-36124 Eichenzell, Internet: [www.kcl.de](http://www.kcl.de)).

Splash contact

Material: Nitrile rubber

Minimum layer thickness: 0.11 mm

Break through time: 480 min

Material tested:KCL 741 Dermatril® L

### Body Protection

Acid-resistant protective clothing

### Respiratory protection

required when dusts are generated.

Our recommendations on filtering respiratory protection are based on the following standards: DIN EN 143, DIN 14387 and other accompanying standards relating to the used respiratory protection system.

### Control of environmental exposure

Do not let product enter drains.

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## SECTION 9: Physical and chemical properties

### 9.1 Information on basic physical and chemical properties

- |  |  |
|--|--|
| a) Appearance                              | Form: solid<br>Color: colorless  |
| b) Odor                                    | No data available  |
| c) Odor Threshold                          | No data available  |
| d) pH                                      | 2 at 50 g/l at 20 °C (68 °F)   |
| e) Melting point/freezing point            | Melting point/range: 78 - 80 °C (172 - 176 °F) - OECD Test Guideline 102 |
| f) Initial boiling point and boiling range | 169 °C 336 °F at 998 hPa - OECD Test Guideline 103                       |

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g) Flash point	> 300 °C (> 572 °F) - (decomposition)
h) Evaporation rate	No data available
i) Flammability (solid, gas)	No data available
j) Upper/lower flammability or explosive limits	No data available
k) Vapor pressure	0.0041 hPa at 25 °C (77 °F) - OECD Test Guideline 104
l) Vapor density	No data available
m) Relative density	No data available
n) Water solubility	300 g/l at 22 °C (72 °F) - OECD Test Guideline 105
o) Partition coefficient: n-octanol/water	log Pow: < 0.3 at 25 °C (77 °F) - OECD Test Guideline 117 - Bioaccumulation is not expected.
p) Autoignition temperature	No data available
q) Decomposition temperature	No data available
r) Viscosity	6.149 mm <sup>2</sup> /s at 23 °C (73 °F) - OECD Test Guideline 114 -
s) Explosive properties	No data available
t) Oxidizing properties	No data available

## 9.2 Other safety information

Bulk density	ca.600 kg/m <sup>3</sup>
Solubility in other solvents	Methanol > 1.402 g/l at 22 °C (72 °F) - OECD Test Guideline 105
Surface tension	57 mN/m at 20 °C (68 °F) - OECD Test Guideline 115
Dissociation constant	3.1 at 25 °C (77 °F) - OECD Test Guideline 112

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## SECTION 10: Stability and reactivity

### 10.1 Reactivity

Forms explosive mixtures with air on intense heating.  
 A range from approx. 15 Kelvin below the flash point is to be rated as critical.  
 The following applies in general to flammable organic substances and mixtures: in correspondingly fine distribution, when whirled up a dust explosion potential may generally be assumed.

### 10.2 Chemical stability

The product is chemically stable under standard ambient conditions (room temperature) .

### 10.3 Possibility of hazardous reactions

No data available

### 10.4 Conditions to avoid

Strong heating.

### 10.5 Incompatible materials

Bases, Oxidizing agents, Reducing agents Strong oxidizing agents

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## 10.6 Hazardous decomposition products

In the event of fire: see section 5

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## SECTION 11: Toxicological information

### 11.1 Information on toxicological effects

#### Acute toxicity

LD50 Oral - Rat - male and female - 2,040 mg/kg  
(US-EPA)

LC50 Inhalation - Rat - male and female - 4 h - 3.6 mg/l  
(OECD Test Guideline 403)

Dermal: No data available

No data available

#### Skin corrosion/irritation

Skin - Rabbit

Result: Corrosive - 4 h

(OECD Test Guideline 404)

#### Serious eye damage/eye irritation

Eyes - Rabbit

Result: Irreversible effects on the eye

(OECD Test Guideline 405)

Remarks: (as aqueous solution)

Eyes - Rabbit

Result: Severe eye irritation

#### Respiratory or skin sensitization

Sensitisation test: - Guinea pig

Result: negative

(OECD Test Guideline 406)

#### Germ cell mutagenicity

Test Type: reverse mutation assay

Test system: *S. typhimurium*

Metabolic activation: with and without metabolic activation

Method: OECD Test Guideline 471

Result: negative

Test Type: reverse mutation assay

Test system: *E. coli*

Metabolic activation: with and without metabolic activation

Method: OECD Test Guideline 471

Result: negative

Test Type: Micronucleus test

Species: Mouse

Cell type: Bone marrow

Application Route: Oral

Method: OECD Test Guideline 474

Result: negative

#### Carcinogenicity

No data available

#### Reproductive toxicity

No data available

**Specific target organ toxicity - single exposure**

No data available

**Specific target organ toxicity - repeated exposure**

No data available

**Aspiration hazard**

No data available

**11.2 Additional Information**

Repeated dose toxicity - Rat - male and female - Oral - 90 d - NOAEL (No observed adverse effect level) - 150 mg/kg - LOAEL (Lowest observed adverse effect level) - 300 mg/kg

Repeated dose toxicity - Rat - male - Inhalation - 14 d  
Remarks: (ECHA)

Material is extremely destructive to tissue of the mucous membranes and upper respiratory tract, eyes, and skin., Cough, Shortness of breath, Headache, Nausea, To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

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**SECTION 12: Ecological information****12.1 Toxicity**

Toxicity to fish                      static test LC50 - Pimephales promelas (fathead minnow) - 164 mg/l - 96 h  
(US-EPA)  
Remarks: (above the solubility limit in the test medium)

Toxicity to daphnia and other aquatic invertebrates                      static test EC50 - Daphnia magna (Water flea) - 141 mg/l - 48 h  
(OECD Test Guideline 202)  
Remarks: (above the solubility limit in the test medium)

Toxicity to algae                      static test ErC50 - Pseudokirchneriella subcapitata (green algae) - 44 mg/l - 72 h  
(OECD Test Guideline 201)  
static test NOEC - Pseudokirchneriella subcapitata (green algae) - 10 mg/l - 72 h  
(OECD Test Guideline 201)  
static test EC50 - Pseudokirchneriella subcapitata (microalgae) - 21.6 mg/l - 72 h  
(OECD Test Guideline 201)

Toxicity to bacteria                      static test EC50 - activated sludge - > 70 mg/l - 3 h  
(OECD Test Guideline 209)

**12.2 Persistence and degradability**

Biodegradability                      aerobic - Exposure time 11 d  
Result: 78 % - Readily biodegradable.  
(OECD Test Guideline 301B)



### 12.3 Bioaccumulative potential

No data available

### 12.4 Mobility in soil

No data available

### 12.5 Results of PBT and vPvB assessment

PBT/vPvB assessment not available as chemical safety assessment not required/not conducted

### 12.6 Other adverse effects

Harmful effect due to pH shift.

Discharge into the environment must be avoided.

May be harmful to aquatic organisms due to the shift of the pH. Avoid release to the environment.

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## SECTION 13: Disposal considerations

### 13.1 Waste treatment methods

#### Product

Waste material must be disposed of in accordance with the national and local regulations. Leave chemicals in original containers. No mixing with other waste. Handle uncleaned containers like the product itself. See [www.retrologistik.com](http://www.retrologistik.com) for processes regarding the return of chemicals and containers, or contact us there if you have further questions.

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## SECTION 14: Transport information

#### TDG

UN number: 3261 Class: 8

Packing group: II

Proper shipping name: CORROSIVE SOLID, ACIDIC, ORGANIC, N.O.S. (Glycolic acid)

Labels: 8

ERG Code: 154

Marine pollutant: no

#### IMDG

UN number: 3261 Class: 8

Packing group: II

EMS-No: F-A, S-B

Proper shipping name: CORROSIVE SOLID, ACIDIC, ORGANIC, N.O.S. (Glycolic acid)

#### IATA

UN number: 3261 Class: 8

Packing group: II

Proper shipping name: Corrosive solid, acidic, organic, n.o.s. (Glycolic acid)

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## SECTION 15: Regulatory information

This product has been classified in accordance with the hazard criteria of the Hazardous Products Regulations (HPR) and the SDS contains all the information required by the HPR.

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**SECTION 16: Other information****Further information**

The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. Sigma-Aldrich Corporation and its Affiliates shall not be held liable for any damage resulting from handling or from contact with the above product. See [www.sigma-aldrich.com](http://www.sigma-aldrich.com) and/or the reverse side of invoice or packing slip for additional terms and conditions of sale.

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