



MATERIAL SAFETY DATA SHEET

according to the (US) Hazard Communication Standard (29 CFR 1910.1200)

Date of issue: 02/05/2013

Version 1.0

SECTION 1. Identification

Product identifier

Product number	814186
Product name	Glycolic acid (70% solution in water) for synthesis

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

Identified uses	Chemical for synthesis
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Details of the supplier of the safety data sheet

Company	EMD Millipore Corporation 290 Concord Road, Billerica, MA 01821, United States of America SDS Phone Support: +1-978-715-1335 General Inquiries: +1-978-715-4321 Monday to Friday, 9:00 AM to 4:00 PM Eastern Time (GMT-5) e-mail: mm_sds@merckgroup.com
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Emergency telephone	800-424-9300 CHEMTREC (USA) +1-703-527-3887 CHEMTREC (International) 24 Hours/day; 7 Days/week
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SECTION 2. Hazards identification

GHS Classification

Reproductive toxicity, Category 1B, H360FD
Skin corrosion, Category 1B, H314

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

GHS-Labeling

Hazard pictograms



Signal Word
Danger

Hazard Statements

H360FD May damage fertility. May damage the unborn child.
H314 Causes severe skin burns and eye damage.

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Precautionary Statements

P201 Obtain special instructions before use.
P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.
P301 + P330 + P331 IF SWALLOWED: rinse mouth. Do NOT induce vomiting.
P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P309 + P310 IF exposed or if you feel unwell: Immediately call a POISON CENTER or doctor/physician.

Restricted to professional users.

OSHA Hazards

This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

Other hazards

None known.

SECTION 3. Composition/information on ingredients

Chemical nature Aqueous solution

Hazardous ingredients

Chemical Name (Concentration)
CAS-No.
Glycolic acid (>= 50 % - < 70 %)
79-14-1

SECTION 4. First aid measures

Description of first-aid measures

Inhalation

After inhalation: fresh air. Call in physician.

Skin contact

After skin contact: wash off with plenty of water. Immediately remove contaminated clothing. If available swab with polyethylene glycol 400. Call a physician immediately.

Eye contact

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

Ingestion

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

Never give anything by mouth to an unconscious person.

Most important symptoms and effects, both acute and delayed

Irritation and corrosion, bronchitis, Cough, Shortness of breath, Unconsciousness, Nausea, Headache, Tiredness, shock, ataxia (impaired locomotor coordination)

Indication of any immediate medical attention and special treatment needed

No information available.

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SECTION 5. Fire-fighting measures

Extinguishing media

Suitable extinguishing media

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Unsuitable extinguishing media

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

Special hazards arising from the substance or mixture

Not combustible.

Ambient fire may liberate hazardous vapors.

Advice for firefighters

Special protective equipment for fire-fighters

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

Further information

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

SECTION 6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

Advice for non-emergency personnel: Do not breathe vapors, aerosols. Avoid substance contact. Ensure adequate ventilation. Evacuate the danger area, observe emergency procedures, consult an expert.

Advice for emergency responders: Protective equipment see section 8.

Environmental precautions

Do not empty into drains.

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 with liquid-absorbent and neutralizing material (e.g. Chemisorb® H⁺, Merck Art. No. 101595). Dispose of properly. Clean up affected area.

SECTION 7. Handling and storage

Precautions for safe handling

Observe label precautions.

Work under hood. Do not inhale substance/mixture. Avoid generation of vapors/aerosols.

Conditions for safe storage, including any incompatibilities

Requirements for storage areas and containers

No aluminum, tin, or zinc containers.

Tightly closed. Keep in a well-ventilated place. Keep locked up or in an area accessible only to qualified or authorized persons.

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Store at +15°C to +25°C (+59°F to +77°F).

SECTION 8. Exposure controls/personal protection

Exposure limit(s)

Contains no substances with occupational exposure limit values.

Engineering measures

Technical measures and appropriate working operations should be given priority over the use of personal protective equipment.

Individual protection measures

Protective clothing should be selected specifically for the workplace, depending on concentration and quantity of the hazardous substances handled. The chemical resistance of the protective equipment should be inquired at the respective supplier.

Hygiene measures

Immediately change contaminated clothing. Apply skin- protective barrier cream. Wash hands and face after working with substance.

Eye/face protection

Tightly fitting safety goggles

Hand protection

Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary.

Other protective equipment:

protective clothing

Respiratory protection

required when vapors/aerosols are generated.

Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

SECTION 9. Physical and chemical properties

Physical state	liquid
Color	yellow
Odor	characteristic
Odor Threshold	No information available.
pH	0.1 at 77 °F (25 °C)
Melting point	10 °C
Boiling point/boiling range	234 °F (112 °C) at 1,013 hPa
Flash point	not applicable

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Evaporation rate	No information available.
Flammability (solid, gas)	No information available.
Lower explosion limit	No information available.
Upper explosion limit	No information available.
Vapor pressure	No information available.
Relative vapor density	No information available.
Relative density	1.262 g/cm ³ at 68 °F (20 °C)
Water solubility	at 68 °F (20 °C) soluble
Partition coefficient: n-octanol/water	No information available.
Autoignition temperature	No information available.
Decomposition temperature	No information available.
Viscosity, dynamic	11.28 mPa.s at 61 °F (16 °C)
Explosive properties	No information available.

SECTION 10. Stability and reactivity

Reactivity

See below

Chemical stability

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

Possibility of hazardous reactions

Risk of explosion with:

Metals

Conditions to avoid

no information available

Incompatible materials

Gives off hydrogen by reaction with metals.

Hazardous decomposition products

no information available

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SECTION 11. Toxicological information

Information on toxicological effects

Likely route of exposure

Eye contact, Skin contact

Acute oral toxicity

Acute toxicity estimate: 2,788 mg/kg

Calculation method

absorption

Symptoms: If ingested, severe burns of the mouth and throat, as well as a danger of perforation of the esophagus and the stomach.

Acute inhalation toxicity

Symptoms: mucosal irritations, Cough, Shortness of breath, bronchitis, Possible damages:, damage of respiratory tract

Skin irritation

Mixture causes burns.

Eye irritation

Causes serious eye damage. Risk of blindness!

CMR effects

Teratogenicity:

May damage the unborn child.

Reproductive toxicity:

May damage fertility.

Specific target organ systemic toxicity - single exposure

The substance or mixture is not classified as specific target organ toxicant, single exposure.

Specific target organ systemic toxicity - repeated exposure

The substance or mixture is not classified as specific target organ toxicant, repeated exposure.

Aspiration hazard

Regarding the available data the classification criteria are not fulfilled.

Carcinogenicity

IARC

No ingredient of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

OSHA

No ingredient of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

NTP

No ingredient of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

ACGIH

No ingredient of this product present at levels greater than or

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equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.

Further information

Quantitative data on the toxicity of this product are not available.

Further toxicological data:

After uptake:

Systemic effects:

Nausea, Headache, Tiredness, ataxia (impaired locomotor coordination), shock,

Unconsciousness

Damage to:

Liver, Kidney

Further data:

Other dangerous properties can not be excluded.

Handle in accordance with good industrial hygiene and safety practice.

Ingredients

Glycolic acid

Acute oral toxicity

LD50 rat: 1,938 mg/kg (External MSDS)

Acute inhalation toxicity

LC50 rat: > 5.2 mg/l; 4 h (External MSDS)

Sensitization

Sensitization test: guinea pig

Result: negative

Method: OECD Test Guideline 406

Germ cell mutagenicity

Genotoxicity in vitro

Mutagenicity (mammal cell test): chromosome aberration.

Result: negative

Method: OECD Test Guideline 474

Ames test

Result: negative

Method: OECD Test Guideline 471

methoxyacetic acid

Acute oral toxicity

LD50 rat: 1,000 mg/kg (Lit.)

Symptoms: If ingested, severe burns of the mouth and throat, as well as a danger of perforation of the esophagus and the stomach.

SECTION 12. Ecological information

Ecotoxicity

No information available.

Persistence and degradability

No information available.

Bioaccumulative potential

No information available.

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Mobility in soil

No information available.

Other adverse effects

Additional ecological information

Discharge into the environment must be avoided.

Ingredients

Glycolic acid

Toxicity to fish

LC50 Pimephales promelas (fathead minnow): 164 mg/l; 96 h (Lit.)

Toxicity to daphnia and other aquatic invertebrates

EC50 Daphnia magna (Water flea): 141 mg/l; 48 h

OECD Test Guideline 202

Toxicity to algae

IC50 Pseudokirchneriella subcapitata (green algae): 44 mg/l; 72 h

OECD Test Guideline 201

Toxicity to bacteria

EC0 Bacteria: > 1,000 mg/l; 24 h (IUCLID)

Biodegradability

89.6 %; 7 d

OECD Test Guideline 301D

Readily biodegradable.

methoxyacetic acid

Biodegradability

> 70 %

OECD Test Guideline 302B

Readily eliminated from water

SECTION 13. Disposal considerations

The information presented only applies to the material as supplied. The identification based on characteristic(s) or listing may not apply if the material has been used or otherwise contaminated. It is the responsibility of the waste generator to determine the toxicity and physical properties of the material generated to determine the proper waste identification and disposal methods in compliance with applicable regulations. Disposal should be in accordance with applicable regional, national and local laws and regulations.

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SECTION 14. Transport information

Land transport (DOT)

UN number

UN 3265

Proper shipping name

CORROSIVE LIQUID, ACIDIC, ORGANIC, N.O.S. (GLYCOLLIC ACID)

Class

8

Packing group

II

Environmentally hazardous

--

Air transport (IATA)

UN number

UN 3265

Proper shipping name

CORROSIVE LIQUID, ACIDIC, ORGANIC, N.O.S. (GLYCOLLIC ACID)

Class

8

Packing group

II

Environmentally hazardous

--

Special precautions for user

no

Sea transport (IMDG)

UN number

UN 3265

Proper shipping name

CORROSIVE LIQUID, ACIDIC, ORGANIC, N.O.S. (GLYCOLLIC ACID)

Class

8

Packing group

II

Environmentally hazardous

--

Special precautions for user

yes

EmS

F-A S-B

SECTION 15. Regulatory information

United States of America

OSHA Hazards

Teratogen

Reproductive hazard

Corrosive to skin

Corrosive to eyes

Corrosive by inhalation.

This information is based on 29 CFR 1910.1200 criteria prior to adoption of the GHS, and may deviate from the GHS information on the label and in section 2.

SARA 311/312 Hazards

Acute Health Hazard

Chronic Health Hazard

SARA 313

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SARA 313: This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

SARA 302

SARA 302: No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

Clean Water Act

This product does not contain any Hazardous Substances listed under the U.S. CleanWater Act, Section 311, Table 116.4A.

This product does not contain any Hazardous Chemicals listed under the U.S. CleanWater Act, Section 311, Table 117.3.

Massachusetts Right To Know

Remarks

No components are subject to the Massachusetts Right to Know Act.

Pennsylvania Right To Know

Ingredients

Glycolic acid

water

New Jersey Right To Know

Ingredients

Glycolic acid

water

Notification status

TSCA:

On TSCA Inventory

DSL:

This product contains one or several components listed in the Canadian NDSL.

Ingredients

methoxyacetic acid

SECTION 16. Other information

Training advice

Provide adequate information, instruction and training for operators.

Full text of H-Statements referred to under sections 2 and 3.

H314

Causes severe skin burns and eye damage.

H360FD

May damage fertility. May damage the unborn child.

Key or legend to abbreviations and acronyms used in the safety data sheet

Used abbreviations and acronyms can be looked up at www.wikipedia.org.

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The information contained herein is based on the present state of our knowledge. It characterizes the product with regard to appropriate safety precautions. It does not represent a warranty of any product properties and we assume no liability for any loss or injury which may result from the use of this information. Users should conduct their own investigations to determine the suitability of the information.

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