

SAFETY DATA SHEET

Version 5.2
Revision Date 03/06/2015
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1. PRODUCT AND COMPANY IDENTIFICATION**1.1 Product identifiers**

Product name : Hematoxylin Solution, Gill No. 1
Product Number : GHS1128
Brand : Sigma

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

Identified uses : Laboratory chemicals, Manufacture of substances

1.3 Details of the supplier of the safety data sheet

Company : Sigma-Aldrich
3050 Spruce Street
SAINT LOUIS MO 63103
USA
Telephone : +1 800-325-5832
Fax : +1 800-325-5052

1.4 Emergency telephone number

Emergency Phone # : (314) 776-6555

2. HAZARDS IDENTIFICATION**2.1 Classification of the substance or mixture****GHS Classification in accordance with 29 CFR 1910 (OSHA HCS)**

Acute toxicity, Oral (Category 4), H302
Skin irritation (Category 2), H315
Eye irritation (Category 2A), H319
Respiratory sensitisation (Category 1), H334
Skin sensitisation (Category 1), H317

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)

H302 Harmful if swallowed.
H315 Causes skin irritation.
H317 May cause an allergic skin reaction.
H319 Causes serious eye irritation.
H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.

Precautionary statement(s)

P261 Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray.
P264 Wash skin thoroughly after handling.
P270 Do not eat, drink or smoke when using this product.
P272 Contaminated work clothing should not be allowed out of the workplace.
P280 Wear protective gloves/ eye protection/ face protection.

| | |
|--------------------|--|
| P285 | In case of inadequate ventilation wear respiratory protection. |
| P301 + P312 | IF SWALLOWED: Call a POISON CENTER or doctor/ physician if you feel unwell. |
| P302 + P352 | IF ON SKIN: Wash with plenty of soap and water. |
| P304 + P341 | IF INHALED: If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing. |
| P305 + P351 + P338 | IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. |
| P321 | Specific treatment (see supplemental first aid instructions on this label). |
| P330 | Rinse mouth. |
| P333 + P313 | If skin irritation or rash occurs: Get medical advice/ attention. |
| P337 + P313 | If eye irritation persists: Get medical advice/ attention. |
| P342 + P311 | If experiencing respiratory symptoms: Call a POISON CENTER or doctor/ physician. |
| P362 | Take off contaminated clothing and wash before reuse. |
| P501 | Dispose of contents/ container to an approved waste disposal plant. |

Sensitising components:
Sodium iodate
May produce an allergic reaction.

2.3 Hazards not otherwise classified (HNOC) or not covered by GHS - none

3. COMPOSITION/INFORMATION ON INGREDIENTS

3.2 Mixtures

Hazardous components

| Component | Classification | Concentration |
|---|---|----------------|
| Ethylene glycol | | |
| CAS-No. 107-21-1 | Acute Tox. 4; STOT RE 2; H302, H373 | >= 20 - < 30 % |
| EC-No. 203-473-3 | | |
| Index-No. 603-027-00-1 | | |
| Registration number 01-2119456816-28-XXXX | | |
| Acetic acid | | |
| CAS-No. 64-19-7 | Flam. Liq. 3; Skin Corr. 1A; Eye Dam. 1; H226, H314, H318 | >= 1 - < 5 % |
| EC-No. 200-580-7 | | |
| Index-No. 607-002-00-6 | | |
| Sodium iodate | | |
| CAS-No. 7681-55-2 | Ox. Sol. 2; Acute Tox. 4; Resp. Sens. 1; Skin Sens. 1; H272, H302, H317, H334 | >= 0.1 - < 1 % |
| EC-No. 231-672-5 | | |

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

4. FIRST AID MEASURES

4.1 Description of first aid measures

General advice

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

If inhaled

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

In case of skin contact

Wash off with soap and plenty of water. Consult a physician.

In case of eye contact

Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician. Continue rinsing eyes during transport to hospital.

If swallowed

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

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

5. FIREFIGHTING MEASURES**5.1 Extinguishing media****Suitable extinguishing media**

Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

5.2 Special hazards arising from the substance or mixture

No data available

5.3 Advice for firefighters

Wear self-contained breathing apparatus for firefighting if necessary.

5.4 Further information

No data available

6. ACCIDENTAL RELEASE MEASURES**6.1 Personal precautions, protective equipment and emergency procedures**

Use personal protective equipment. Avoid breathing vapours, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas.

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

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

6.4 Reference to other sections

For disposal see section 13.

7. HANDLING AND STORAGE**7.1 Precautions for safe handling**

Avoid contact with skin and eyes. Avoid inhalation of vapour or mist.

For precautions see section 2.2.

7.2 Conditions for safe storage, including any incompatibilities

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.

7.3 Specific end use(s)

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

8. EXPOSURE CONTROLS/PERSONAL PROTECTION**8.1 Control parameters****Components with workplace control parameters**

| Component | CAS-No. | Value | Control parameters | Basis |
|-----------------|----------|--|--------------------|---|
| | Remarks | See Appendix D - Substances with No Established RELs | | |
| Ethylene glycol | 107-21-1 | C | 100.000000 mg/m3 | USA. ACGIH Threshold Limit Values (TLV) |
| | | Eye & Upper Respiratory Tract irritation Not classifiable as a human carcinogen | | |

| | | | | |
|-------------|---------|--|----------------------------------|--|
| | | C | 100.000000 mg/m3 | USA. ACGIH Threshold Limit Values (TLV) |
| | | Upper Respiratory Tract irritation Eye irritation Not classifiable as a human carcinogen | | |
| | | C | 100 mg/m3 | USA. ACGIH Threshold Limit Values (TLV) |
| | | Upper Respiratory Tract irritation Eye irritation Adopted values or notations enclosed are those for which changes are proposed in the NIC See Notice of Intended Changes (NIC) Not classifiable as a human carcinogen | | |
| Acetic acid | 64-19-7 | TWA | 10.000000 ppm | USA. ACGIH Threshold Limit Values (TLV) |
| | | Pulmonary function Upper Respiratory Tract irritation Eye irritation | | |
| | | STEL | 15.000000 ppm | USA. ACGIH Threshold Limit Values (TLV) |
| | | Pulmonary function Upper Respiratory Tract irritation Eye irritation | | |
| | | ST | 15.000000 ppm 37.000000 mg/m3 | USA. NIOSH Recommended Exposure Limits |
| | | Can be found in concentrations of 5-8% in vinegar | | |
| | | TWA | 10.000000 ppm 25.000000 mg/m3 | USA. NIOSH Recommended Exposure Limits |
| | | Can be found in concentrations of 5-8% in vinegar | | |
| | | TWA | 10.000000 ppm 25.000000 mg/m3 | USA. Occupational Exposure Limits (OSHA) - Table Z-1 Limits for Air Contaminants |
| | | The value in mg/m3 is approximate. | | |
| | | TWA | 10 ppm | USA. ACGIH Threshold Limit Values (TLV) |
| | | Pulmonary function Upper Respiratory Tract irritation Eye irritation | | |
| | | STEL | 15 ppm | USA. ACGIH Threshold Limit Values (TLV) |
| | | Pulmonary function Upper Respiratory Tract irritation Eye irritation | | |
| | | TWA | 10 ppm 25 mg/m3 | USA. NIOSH Recommended Exposure Limits |
| | | Can be found in concentrations of 5-8% in vinegar | | |
| | | ST | 15 ppm 37 mg/m3 | USA. NIOSH Recommended Exposure Limits |
| | | Can be found in concentrations of 5-8% in vinegar | | |
| | | TWA | 10 ppm 25 mg/m3 | USA. Occupational Exposure Limits (OSHA) - Table Z-1 Limits for Air Contaminants |
| | | The value in mg/m3 is approximate. | | |

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.

Personal protective equipment

Eye/face protection

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

Skin 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.

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 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 NIOSH (US) or CEN (EU).

Control of environmental exposure

Do not let product enter drains.

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

- | | |
|---|-------------------|
| a) Appearance | Form: liquid |
| b) Odour | No data available |
| c) Odour Threshold | No data available |
| d) pH | 2.5 - 3.5 |
| e) Melting point/freezing point | No data available |
| f) Initial boiling point and boiling range | No data available |
| g) Flash point | No data available |
| h) Evaporation rate | No data available |
| i) Flammability (solid, gas) | No data available |
| j) Upper/lower flammability or explosive limits | No data available |
| k) Vapour pressure | No data available |
| l) Vapour density | No data available |
| m) Relative density | No data available |
| n) Water solubility | No data available |
| o) Partition coefficient: n-octanol/water | No data available |
| p) Auto-ignition temperature | No data available |
| q) Decomposition temperature | No data available |

- r) Viscosity No data available
- s) Explosive properties No data available
- t) Oxidizing properties No data available

9.2 Other safety information

No data available

10. STABILITY AND REACTIVITY

10.1 Reactivity

No data available

10.2 Chemical stability

Stable under recommended storage conditions.

10.3 Possibility of hazardous reactions

No data available

10.4 Conditions to avoid

No data available

10.5 Incompatible materials

Strong oxidizing agents

10.6 Hazardous decomposition products

Other decomposition products - No data available
In the event of fire: see section 5

11. TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Acute toxicity

No data available

Inhalation: No data available

Dermal: No data available

No data available

Skin corrosion/irritation

No data available

Serious eye damage/eye irritation

No data available

Respiratory or skin sensitisation

No data available

Germ cell mutagenicity

No data available

Carcinogenicity

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.

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

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

Reproductive toxicity

No data available

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

Additional Information

RTECS: Not available

When ingested early symptoms mimic alcohol inebriation and are followed by nausea, vomiting, abdominal pain, weakness, muscle tenderness, respiratory failure, convulsions, cardiovascular collapse, pulmonary edema, hypocalcemic tetany, and severe metabolic acidosis. Without treatment, death may occur in 8 to 24 hours. Victims who survive the initial toxicity period usually develop renal failure along with brain and liver damage., Exposure to and/or consumption of alcohol may increase toxic effects.

Central nervous system - Irregularities - Based on Human Evidence

Stomach - Irregularities - Based on Human Evidence

Central nervous system - Irregularities - Based on Human Evidence (Ethylene glycol)

Stomach - Irregularities - Based on Human Evidence (Acetic acid)

Stomach - Irregularities - Based on Human Evidence (Sodium iodate)

Stomach - Irregularities - Based on Human Evidence (Aluminium sulphate hydrate)

12. ECOLOGICAL INFORMATION**12.1 Toxicity**

No data available

12.2 Persistence and degradability

No data available

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

No data available

13. DISPOSAL CONSIDERATIONS**13.1 Waste treatment methods****Product**

Offer surplus and non-recyclable solutions to a licensed disposal company. Contact a licensed professional waste disposal service to dispose of this material. Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber.

Contaminated packaging

Dispose of as unused product.

14. TRANSPORT INFORMATION**DOT (US)**

Not dangerous goods

IMDG

Not dangerous goods

IATA

Not dangerous goods

15. REGULATORY INFORMATION

SARA 302 Components

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

SARA 313 Components

The following components are subject to reporting levels established by SARA Title III, Section 313:

| | CAS-No. | Revision Date |
|-----------------|----------|---------------|
| Ethylene glycol | 107-21-1 | 2007-07-01 |

Massachusetts Right To Know Components

| | CAS-No. | Revision Date |
|-----------------|----------|---------------|
| Ethylene glycol | 107-21-1 | 2007-07-01 |
| Acetic acid | 64-19-7 | 1993-04-24 |

Pennsylvania Right To Know Components

| | CAS-No. | Revision Date |
|-----------------|-----------|---------------|
| Water | 7732-18-5 | |
| Ethylene glycol | 107-21-1 | 2007-07-01 |
| Acetic acid | 64-19-7 | 1993-04-24 |

New Jersey Right To Know Components

| | CAS-No. | Revision Date |
|-----------------|-----------|---------------|
| Water | 7732-18-5 | |
| Ethylene glycol | 107-21-1 | 2007-07-01 |
| Acetic acid | 64-19-7 | 1993-04-24 |

California Prop. 65 Components

This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

16. OTHER INFORMATION

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

| | |
|-------------|---|
| Acute Tox. | Acute toxicity |
| Eye Dam. | Serious eye damage |
| Flam. Liq. | Flammable liquids |
| H226 | Flammable liquid and vapour. |
| H272 | May intensify fire; oxidiser. |
| H302 | Harmful if swallowed. |
| H314 | Causes severe skin burns and eye damage. |
| H315 | Causes skin irritation. |
| H317 | May cause an allergic skin reaction. |
| H318 | Causes serious eye damage. |
| H319 | Causes serious eye irritation. |
| H334 | May cause allergy or asthma symptoms or breathing difficulties if inhaled. |
| H373 | May cause damage to organs (/*_ORG_REP_ORAL*/) through prolonged or repeated exposure if swallowed. |
| Ox. Sol. | Oxidizing solids |
| Resp. Sens. | Respiratory sensitisation |
| Skin Corr. | Skin corrosion |
| Skin Sens. | Skin sensitisation |
| STOT RE | Specific target organ toxicity - repeated exposure |

HMIS Rating

| | |
|------------------------|---|
| Health hazard: | 3 |
| Chronic Health Hazard: | * |
| Flammability: | 0 |
| Physical Hazard | 0 |

NFPA Rating

Health hazard: 3
Fire Hazard: 0
Reactivity Hazard: 0

Further information

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Preparation Information

Sigma-Aldrich Corporation
Product Safety – Americas Region
1-800-521-8956

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