

### 1. PRODUCT AND COMPANY IDENTIFICATION

#### 1.1 Product identifiers

Product name : Hematoxylin Solution, Gill No. 3  
Product Number : GHS380  
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 corrosion (Category 1A), H314  
Serious eye damage (Category 1), H318

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.

H314

Causes severe skin burns and eye damage.

Precautionary statement(s)

P264

Wash skin thoroughly after handling.

P270

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

P280

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

P301 + P312

IF SWALLOWED: Call a POISON CENTER or doctor/ physician if you feel unwell.

P301 + P330 + P331

IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.

P303 + P361 + P353

IF ON SKIN (or hair): Remove/ Take off immediately all contaminated clothing. Rinse skin with water/ shower.

P304 + P340

IF INHALED: Remove victim to fresh air and keep at rest in a position

|                    |  |
|--------------------|--|
| P305 + P351 + P338 | comfortable for breathing.<br>IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. |
| P310               | Immediately call a POISON CENTER or doctor/ physician.   |
| P321               | Specific treatment (see supplemental first aid instructions on this label).  |
| 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

## 3. COMPOSITION/INFORMATION ON INGREDIENTS

### 3.2 Mixtures

#### Hazardous components

| Component   | Classification  | Concentration  |
|---|---|----------------|
| <b>Ethylene glycol</b>  |   |                |
| CAS-No. 107-21-1<br>EC-No. 203-473-3<br>Index-No. 603-027-00-1<br>Registration number 01-2119456816-28-XXXX | Acute Tox. 4; STOT RE 2;<br>H302, H373                          | >= 50 - < 70 % |
| <b>Aluminium sulphate hexadecahydrate</b>   |   |                |
| CAS-No. 16828-11-8<br>EC-No. 233-135-0  | Eye Dam. 1; H318  | >= 10 - < 20 % |
| <b>Acetic acid</b>  |   |                |
| CAS-No. 64-19-7<br>EC-No. 200-580-7<br>Index-No. 607-002-00-6   | Flam. Liq. 3; Skin Corr. 1A;<br>Eye Dam. 1; H226, H314,<br>H318 | >= 5 - < 10 %  |

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

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

#### If inhaled

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

#### In case of skin contact

Take off contaminated clothing and shoes immediately. Wash off with soap and plenty of water. Consult a physician.

#### In case of eye contact

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

#### If swallowed

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

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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## 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

Carbon oxides, Sulphur oxides, Aluminum oxide

### 5.3 Advice for firefighters

Wear self-contained breathing apparatus for firefighting if necessary.

### 5.4 Further information

No data available

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## 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.

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## 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

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## 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<br>Not classifiable as a human carcinogen             |                    |   |
|                 |          | C  | 100.000000 mg/m3   | USA. ACGIH Threshold Limit Values (TLV) |
|                 |          | Upper Respiratory Tract irritation<br>Eye irritation<br>Not classifiable as a human carcinogen |                    |   |
|                 |          | C  | 100 mg/m3          | USA. ACGIH Threshold Limit Values (TLV) |
|                 |          | Upper Respiratory Tract irritation   |                    |   |

|                                    |            |  |                                  |  |
|------------------------------------|------------|--|----------------------------------|--|
|                                    |            | Eye irritation<br>Adopted values or notations enclosed are those for which changes are proposed in the NIC<br>See Notice of Intended Changes (NIC)<br>Not classifiable as a human carcinogen |                                  |  |
| Aluminium sulphate hexadecahydrate | 16828-11-8 | TWA  | 2.000000 mg/m3                   | USA. NIOSH Recommended Exposure Limits   |
| Acetic acid                        | 64-19-7    | TWA  | 10.000000 ppm                    | USA. ACGIH Threshold Limit Values (TLV)  |
|                                    |            | Pulmonary function<br>Upper Respiratory Tract irritation<br>Eye irritation   |                                  |  |
|                                    |            | STEL   | 15.000000 ppm                    | USA. ACGIH Threshold Limit Values (TLV)  |
|                                    |            | Pulmonary function<br>Upper Respiratory Tract irritation<br>Eye irritation   |                                  |  |
|                                    |            | ST   | 15.000000 ppm<br>37.000000 mg/m3 | USA. NIOSH Recommended Exposure Limits   |
|                                    |            | Can be found in concentrations of 5-8% in vinegar  |                                  |  |
|                                    |            | TWA  | 10.000000 ppm<br>25.000000 mg/m3 | USA. NIOSH Recommended Exposure Limits   |
|                                    |            | Can be found in concentrations of 5-8% in vinegar  |                                  |  |
|                                    |            | TWA  | 10.000000 ppm<br>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<br>Upper Respiratory Tract irritation<br>Eye irritation   |                                  |  |
|                                    |            | STEL   | 15 ppm                           | USA. ACGIH Threshold Limit Values (TLV)  |
|                                    |            | Pulmonary function<br>Upper Respiratory Tract irritation<br>Eye irritation   |                                  |  |
|                                    |            | TWA  | 10 ppm<br>25 mg/m3               | USA. NIOSH Recommended Exposure Limits   |
|                                    |            | Can be found in concentrations of 5-8% in vinegar  |                                  |  |
|                                    |            | ST   | 15 ppm<br>37 mg/m3               | USA. NIOSH Recommended Exposure Limits   |
|                                    |            | Can be found in concentrations of 5-8% in vinegar  |                                  |  |
|                                    |            | TWA  | 10 ppm<br>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

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 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.

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**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   | No data available |
| 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

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## 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

No data available

### 10.6 Hazardous decomposition products

In the event of fire: see section 5

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## 11. TOXICOLOGICAL INFORMATION

### 11.1 Information on toxicological effects

#### Acute toxicity

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

To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

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 (Aluminium sulphate hexadecahydrate)

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

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## 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

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## 13. DISPOSAL CONSIDERATIONS

### 13.1 Waste treatment methods

#### Product

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. Offer surplus and non-recyclable solutions to a licensed disposal company.

#### Contaminated packaging

Dispose of as unused product.

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## 14. TRANSPORT INFORMATION

### DOT (US)

Not dangerous goods

### IMDG

Not dangerous goods

### IATA

Not dangerous goods

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## 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    |

### SARA 311/312 Hazards

Acute Health Hazard, Chronic Health Hazard

### Massachusetts Right To Know Components

|             | CAS-No. | Revision Date |
|-------------|---------|---------------|
| Acetic acid | 64-19-7 | 1993-04-24    |

|                                    |            |            |
|------------------------------------|------------|------------|
| Ethylene glycol                    | 107-21-1   | 2007-07-01 |
| Aluminium sulphate hexadecahydrate | 16828-11-8 | 1993-04-24 |

**Pennsylvania Right To Know Components**

|                                    | CAS-No.    | Revision Date |
|------------------------------------|------------|---------------|
| Acetic acid                        | 64-19-7    | 1993-04-24    |
| Ethylene glycol                    | 107-21-1   | 2007-07-01    |
| Aluminium sulphate hexadecahydrate | 16828-11-8 | 1993-04-24    |

**New Jersey Right To Know Components**

|                                    | CAS-No.    | Revision Date |
|------------------------------------|------------|---------------|
| Acetic acid                        | 64-19-7    | 1993-04-24    |
| Ethylene glycol                    | 107-21-1   | 2007-07-01    |
| Aluminium sulphate hexadecahydrate | 16828-11-8 | 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.  |
| H302       | Harmful if swallowed.   |
| H314       | Causes severe skin burns and eye damage.  |
| H318       | Causes serious eye damage.  |
| H373       | May cause damage to organs (/*_ORG_REP_ORAL*/) through prolonged or repeated exposure if swallowed. |
| Skin Corr. | Skin corrosion  |
| 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**

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 Product Safety – Americas Region  
 1-800-521-8956

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