

## SAFETY DATA SHEET

Version 8.1  
Revision Date 04/13/2021  
Print Date 05/03/2021**SECTION 1: Identification of the substance/mixture and of the company/undertaking****1.1 Product identifiers**Product name : Hematoxylin solution modified acc. to Gill III  
for microscopyProduct Number : 1.05174  
Brand : Millipore**1.2 Relevant identified uses of the substance or mixture and uses advised against**Identified uses : In vitro diagnostic reagent, Reagent for analysis  
Uses advised against : This product is not intended for consumer use.**1.3 Details of the supplier of the safety data sheet**Company : EMD Millipore Corporation  
400 Summit Drive  
BURLINGTON MA 01803  
UNITED STATES OF AMERICA (THE)

Telephone : +1 800-645-5476

**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 29 CFR 1910 (OSHA HCS)**Serious eye damage (Category 1), H318  
Specific target organ toxicity - repeated exposure, Oral (Category 2), Kidney, H373  
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)

H318 : Causes serious eye damage.  
H373 : May cause damage to organs (Kidney) through prolonged or  
repeated exposure if swallowed.

Precautionary statement(s)	
P260	Do not breathe dust/ fume/ gas/ mist/ vapors/ spray.
P280	Wear eye protection/ face protection.
P305 + P351 + P338 +	IF IN EYES: Rinse cautiously with water for several minutes.
P310	Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER/ doctor.
P314	Get medical advice/ attention if you feel unwell.
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

### 3.2 Mixtures

Component	Classification	Concentration
<b>ethylene glycol</b>		
CAS-No.	107-21-1	Acute Tox. 4; STOT RE 2; H302, H373
EC-No.	203-473-3	
Index-No.	603-027-00-1	
Registration number	01-2119456816-28-XXXX	
<b>aluminium sulfate</b>		
CAS-No.	10043-01-3	Met. Corr. 1; Eye Dam. 1; H290, H318
EC-No.	233-135-0	
Registration number	01-2119531538-36-XXXX	

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

## SECTION 4: First aid measures

### 4.1 Description of first-aid measures

#### General advice

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.

#### 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: immediately make victim drink water (two glasses at most). 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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### **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**

Mixture with combustible ingredients.

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**

Suppress (knock down) gases/vapors/mists with a water spray jet. 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: Do not breathe vapors, aerosols. 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 carefully with liquid-absorbent material (e.g. Chemizorb®). Dispose of properly. Clean up affected area.

#### **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**

For precautions see section 2.2.

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

##### **Storage conditions**

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Tightly closed.

Recommended storage temperature see product label.

Storage class (TRGS 510): 10: Combustible liquids

### 7.3 Specific end use(s)

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

## SECTION 8: Exposure controls/personal protection

### 8.1 Control parameters

#### Ingredients with workplace control parameters

Component	CAS-No.	Value	Control parameters	Basis
ethylene glycol	107-21-1	TWA	25 ppm	USA. ACGIH Threshold Limit Values (TLV)
	Remarks	Not classifiable as a human carcinogen		
		STEL	50 ppm	USA. ACGIH Threshold Limit Values (TLV)
		Not classifiable as a human carcinogen		
		STEL	10 mg/m <sup>3</sup>	USA. ACGIH Threshold Limit Values (TLV)
		Not classifiable as a human carcinogen		
		C	50 ppm 125 mg/m <sup>3</sup>	USA. OSHA - TABLE Z-1 Limits for Air Contaminants - 1910.1000
		C	40 ppm 100 mg/m <sup>3</sup>	California permissible exposure limits for chemical contaminants (Title 8, Article 107)
aluminium sulfate	10043-01-3	TWA	2 mg/m <sup>3</sup>	USA. NIOSH Recommended Exposure Limits
		PEL	2 mg/m <sup>3</sup>	California permissible exposure limits for chemical contaminants (Title 8, Article 107)

### 8.2 Exposure controls

#### Appropriate engineering controls

Change contaminated clothing. Preventive skin protection recommended. Wash hands 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**

protective clothing

### **Respiratory protection**

required when vapours/aerosols 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: liquid<br>Color: reddish-violet |
| b) Odor                                         | weak characteristic odour             |
| c) Odor Threshold                               | No data available                     |
| d) pH                                           | ca.2.5 at 20 °C (68 °F)               |
| 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) Vapor pressure                               | No data available                     |

- |    |                                           |                   |
|----|-------------------------------------------|-------------------|
| l) | Vapor density                             | No data available |
| m) | Relative density                          | No data available |
| n) | Water solubility                          | soluble           |
| o) | Partition coefficient:<br>n-octanol/water | No data available |
| p) | Autoignition<br>temperature               | No data available |
| q) | Decomposition<br>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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## SECTION 10: Stability and reactivity

### 10.1 Reactivity

No data available

### 10.2 Chemical stability

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

### 10.3 Possibility of hazardous reactions

Violent reactions possible with:

The generally known reaction partners of water.

Risk of explosion with:

Aluminum

perchloric acid

Risk of ignition or formation of inflammable gases or vapours with:

chromyl chloride

Strong oxidizing agents

chlorates

Peroxides

potassium permanganate

Exothermic reaction with:

chlorosulfonic acid

Sodium hydroxide

fuming sulfuric acid

sulfuric acid

Violent reactions possible with:

The generally known reaction partners of water.

### 10.4 Conditions to avoid

no information available

### 10.5 Incompatible materials

various plastics

## 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

#### Mixture

##### Acute toxicity

Acute toxicity estimate Oral - 2,012 mg/kg  
(Calculation method)

Symptoms: Possible symptoms: , mucosal irritations

Acute toxicity estimate Dermal - > 5,000 mg/kg  
(Calculation method)

No data available

##### Skin corrosion/irritation

No data available

##### Serious eye damage/eye irritation

Mixture causes serious eye damage.

##### Respiratory or skin sensitization

No data available

##### Germ cell mutagenicity

No data available

##### 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.

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.

OSHA: No component of this product present at levels greater than or equal to 0.1% is on OSHA's list of regulated carcinogens.

##### Reproductive toxicity

No data available

##### Specific target organ toxicity - single exposure

No data available

##### Specific target organ toxicity - repeated exposure

Mixture may cause damage to organs through prolonged or repeated exposure. - Kidney

##### Aspiration hazard

No data available

### 11.2 Additional Information

Not available

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Other dangerous properties can not be excluded.

Handle in accordance with good industrial hygiene and safety practice.

## Components

### ethylene glycol

#### Acute toxicity

LD50 Oral - 500.1 mg/kg  
(Regulation (EC) No 1272/2008, Annex VI)

LC50 Inhalation - Rat - male and female - 6 h - > 2.5 mg/l

Remarks:

(ECHA)

LD50 Dermal - Mouse - male and female - > 3,500 mg/kg

Remarks:

(ECHA)

No data available

#### Skin corrosion/irritation

Skin - Rabbit

Result: No skin irritation - 20 h

Remarks:

(ECHA)

#### Serious eye damage/eye irritation

Eyes - Rabbit

Result: No eye irritation - 24 h

Remarks:

(ECHA)

#### Respiratory or skin sensitization

Maximization Test - Guinea pig

Result: negative

(OECD Test Guideline 406)

#### Germ cell mutagenicity

Ames test

Escherichia coli/Salmonella typhimurium

Result: negative

Rat - male and female

Result: negative

#### Carcinogenicity

This product is or contains a component that is probably not carcinogenic based on its IARC, ACGIH, NTP, or EPA classification.

#### Reproductive toxicity

Laboratory experiments have shown teratogenic effects.

Overexposure may cause reproductive disorder(s) based on tests with laboratory animals.

#### Specific target organ toxicity - single exposure

No data available



**Specific target organ toxicity - repeated exposure**

Oral - May cause damage to organs through prolonged or repeated exposure. -  
Kidney

**Aspiration hazard**

No data available

**aluminium sulfate****Acute toxicity**

LD50 Oral - Rat - male and female - > 2,000 mg/kg  
(OECD Test Guideline 401)

Inhalation: No data available

LD50 Dermal - Rabbit - male and female - > 5,000 mg/kg  
(OECD Test Guideline 402)

No data available

**Skin corrosion/irritation**

Skin - Rabbit

Result: No skin irritation - 4 h  
(OECD Test Guideline 404)

**Serious eye damage/eye irritation**

Eyes - Rabbit

Result: Irreversible effects on the eye  
(OECD Test Guideline 405)

**Respiratory or skin sensitization**

Local lymph node assay (LLNA) - Mouse

Result: negative  
(OECD Test Guideline 429)

**Germ cell mutagenicity**

Ames test

Escherichia coli/Salmonella typhimurium

Result: negative

In vitro mammalian cell gene mutation test  
mouse lymphoma cells

Result: negative

Micronucleus test

Human lymphocytes

Result: negative

OECD Test Guideline 474

Rat - male and female

Result: negative

Remarks:

(in analogy to similar products)

The value is given in analogy to the following substances: aluminium hydroxide

Rat

Remarks:

Cytogenetic analysis

**Carcinogenicity****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

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

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**

Discharge into the environment must be avoided.

**Components****ethylene glycol**

Toxicity to fish	static test LC50 - Pimephales promelas (fathead minnow) - > 72,860 mg/l - 96 h (US-EPA)
Toxicity to daphnia and other aquatic invertebrates	static test EC50 - Daphnia magna (Water flea) - > 100 mg/l - 48 h (OECD Test Guideline 202)
Toxicity to algae	IC5 - Scenedesmus quadricauda (Green algae) - > 10,000 mg/l - 7 d Remarks: (Lit.)
Toxicity to bacteria	static test EC20 - activated sludge - > 1,995 mg/l - 30 min (ISO 8192)

**aluminium sulfate**

Toxicity to fish      semi-static test LC50 - Danio rerio (zebra fish) - &gt; 87.5 mg/l -

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	96 h (OECD Test Guideline 203)
Toxicity to daphnia and other aquatic invertebrates	static test EC50 - Daphnia magna (Water flea) - > 200 mg/l - 48 h (OECD Test Guideline 202)
Toxicity to algae	static test ErC50 - Pseudokirchneriella subcapitata (microalgae) - 0.24 mg/l - 72 h (OECD Test Guideline 201)
Toxicity to bacteria	static test EC50 - activated sludge - > 200 mg/l - 3 h (OECD Test Guideline 209)

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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

#### DOT (US)

Not dangerous goods

#### IMDG

Not dangerous goods

#### IATA

Not dangerous goods

#### Further information

Not classified as dangerous in the meaning of transport regulations.

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## SECTION 15: Regulatory information

#### SARA 302 Components

This material does not contain any components with a section 302 EHS TPQ.

#### 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

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

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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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Version: 8.1

Revision Date: 04/13/2021

Print Date: 05/03/2021