

**SAFETY DATA SHEET**

according to the Global Harmonized System (and with all of the information required by the HPR)

Revision Date 06/13/2018

Version 1.3

**SECTION 1. Identification****Product identifier**

Catalog No. 219801

Product name Hy-1

Hy-1

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

Identified uses Reagent for analysis

**Details of the supplier of the safety data sheet**Company Millipore (Canada) Ltd | 109 Woodbine Downs Blvd. Unit 5 | Etobicoke  
| Ontario M9W 6Y1 | Canada | General Inquiries: +1 800-645-5476 |  
Monday to Friday, 9:00 AM to 4:00 PM Eastern Time (GMT-5)**Emergency telephone**800-424-9300 CHEMTREC (USA)  
+1-703-527-3887 CHEMTREC (International)  
24 Hours/day; 7 Days/week**SECTION 2. Hazards identification****GHS Classification**

Corrosive to Metals, Category 1, H290

Eye irritation, Category 2, H319

Skin sensitization, Category 1, H317

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

**GHS-Labeling***Hazard pictograms**Signal Word*

Warning

*Hazard Statements*

H290 May be corrosive to metals.

H317 May cause an allergic skin reaction.

H319 Causes serious eye irritation.

*Precautionary Statements*

P280 Wear protective gloves.

P302 + P352 IF ON SKIN: Wash with plenty of soap and water.

P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

#### Other hazards

None known.

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### SECTION 3. Composition/information on ingredients

Chemical nature

Aqueous solution of inorganic and organic compounds.

#### Hazardous ingredients

*Chemical name (Concentration)*

CAS-No.

*sulphuric acid (>= 1 % - < 5 % )*

7664-93-9

*4-Dimethylaminobenzaldehyde (>= 1 % - < 5 % )*

100-10-7

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### SECTION 4. First aid measures

#### Description of first-aid measures

*Inhalation*

After inhalation: fresh air.

*Skin contact*

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

*Eye contact*

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

*Ingestion*

After swallowing: immediately make victim drink water (two glasses at most). Consult a physician.

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

irritant effects, Allergic reactions, CNS disorders

The following applies to aromatic amines in general: systemic effect: methemoglobinemia with headache, cardiac dysrhythmia, drop in blood pressure, dyspnoea, and spasms, principal symptom: cyanosis (blue discoloration of the blood).

#### 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*

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**

#### **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 let product enter drains.

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

Take up with liquid-absorbent and neutralizing material (e.g. Chemisorb® H<sup>+</sup>, Art. No. 101595).

Dispose of properly. Clean up affected area.

Cover drains. Collect, bind, and pump off spills. Observe possible material restrictions (see sections 7 and 10).

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### **SECTION 7. Handling and storage**

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

Observe label precautions.

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

##### *Requirements for storage areas and containers*

No metal containers.

Tightly closed.

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

The data applies to the entire pack.

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## SECTION 8. Exposure controls/personal protection

### Exposure limit(s)

#### *Ingredients*

Basis	Value	Threshold limits	Remarks
<i>sulphuric acid (7664-93-9)</i>			
CAD AB OEL	Time Weighted Average (TWA): Short Term Exposure Limit (STEL):	1 mg/m <sup>3</sup> 3 mg/m <sup>3</sup>	
CAD MB OEL	Time Weighted Average (TWA):	0.2 mg/m <sup>3</sup>	Form of exposure: Thoracic fraction.
CAD ON OEL	Time Weighted Average (TWAEV):	0.2 mg/m <sup>3</sup>	Form of exposure: Thoracic fraction.
OEL (QUE)	Time Weighted Average (TWA): Short Term Exposure Limit (STEL):	1 mg/m <sup>3</sup> 3 mg/m <sup>3</sup>	
CAD BC OEL	Time Weighted Average (TWA):	0.2 mg/m <sup>3</sup>	Form of exposure: Mist.

### Engineering measures

#### 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*

Safety glasses

#### *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

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## SECTION 9. Physical and chemical properties

Physical state	liquid
Color	light yellow
Odor	characteristic odor
Odor Threshold	No information available.
pH	ca. 0.6 at 68 °F (20 °C)
Melting point	No information available.
Boiling point	No information available.

Flash point	Not applicable
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.
Density	1.03 g/cm <sup>3</sup> at 68 °F (20 °C)
Relative density	No information available.
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	No information available.
Explosive properties	Not classified as explosive.
Oxidizing properties	none
Corrosion	May be corrosive to metals.

## 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

Violent reactions possible with:

The generally known reaction partners of water.

Strong oxidizing agents, Bases

### Conditions to avoid

no information available

### Incompatible materials

animal/vegetable tissues

Gives off hydrogen by reaction with metals.

Metals

**Hazardous decomposition products**  
in the event of fire: See section 5.

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## SECTION 11. Toxicological information

### Information on toxicological effects

*Likely route of exposure*

Eye contact, Skin contact

*Acute inhalation toxicity*

Symptoms: Possible symptoms:, mucosal irritations

*Eye irritation*

Mixture causes serious eye irritation.

*Sensitization*

Mixture may cause an allergic skin reaction.

*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	Group 1: Carcinogenic to humans sulphuric acid 7664-93-9
OSHA	No component of this product present at levels greater than or equal to 0.1% is on OSHA's list of regulated carcinogens.
NTP	Known carcinogen. sulphuric acid 7664-93-9
ACGIH	A2: Suspected human carcinogen sulphuric acid 7664-93-9

### Further information

After skin contact: irritative response if not handled appropriately. After eye contact: corneal lesions may occur under certain circumstances. After swallowing: damage to the affected mucous membranes possible.

The following applies to aromatic amines in general: systemic effect: methemoglobinemia with headache, cardiac dysrhythmia, drop in blood pressure, dyspnoea, and spasms, principal symptom: cyanosis (blue discoloration of the blood).

Other dangerous properties can not be excluded.

Handle in accordance with good industrial hygiene and safety practice.

### Ingredients

sulphuric acid

*Germ cell mutagenicity*

*Genotoxicity in vitro*

Ames test

Salmonella typhimurium

Result: negative

(HSDB)

## 4-Dimethylaminobenzaldehyde

### *Acute oral toxicity*

LD50 Rat: > 2,000 mg/kg  
OECD Test Guideline 423

### *Skin irritation*

In vitro study  
Result: negative  
OECD Test Guideline 439

### *Eye irritation*

In vitro study  
Result: Eye irritation  
OECD Test Guideline 492

### *In vitro study*

Result: non-corrosive  
OECD Test Guideline 437

### *Sensitization*

Local lymph node assay (LLNA) Mouse  
Result: positive  
Method: OECD Test Guideline 429

### *Germ cell mutagenicity*

#### *Genotoxicity in vitro*

Ames test  
Escherichia coli/Salmonella typhimurium  
Result: negative  
Method: OECD Test Guideline 471

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## SECTION 12. Ecological information

### Ecotoxicity

No information available.

### Persistence and degradability

No information available.

### Bioaccumulative potential

No information available.

### Mobility in soil

No information available.

### Ingredients

#### sulphuric acid

##### *Toxicity to fish*

static test LC50 Lepomis macrochirus (Bluegill sunfish): > 16 - < 28 mg/l; 96 h  
Analytical monitoring: yes(ECHA)

##### *Toxicity to daphnia and other aquatic invertebrates*

static test EC50 Daphnia magna (Water flea): > 100 mg/l; 48 h  
Analytical monitoring: yes  
OECD Test Guideline 202

##### *Toxicity to algae*

static test EC50 Desmodesmus subspicatus (green algae): > 100 mg/l; 72 h  
Analytical monitoring: yes  
OECD Test Guideline 201

##### *Toxicity to fish (Chronic toxicity)*

flow-through test NOEC Cyprinodon sp. (minnow): 0.025 mg/l; 65 d

Analytical monitoring: yes(ECHA)

Substance does not meet the criteria for PBT or vPvB according to Regulation (EC) No 1907/2006, Annex XIII.

#### 4-Dimethylaminobenzaldehyde

##### *Toxicity to fish*

LC50 Pimephales promelas (fathead minnow): 45.7 mg/l; 96 h (External MSDS)

##### *Toxicity to daphnia and other aquatic invertebrates*

semi-static test EC50 Daphnia magna (Water flea): 1.58 mg/l; 48 h

Analytical monitoring: yes

OECD Test Guideline 202

##### *Toxicity to algae*

Growth inhibition ErC50 Desmodesmus subspicatus (green algae): 72.7 mg/l; 72 h

Analytical monitoring: yes

OECD Test Guideline 201

Growth inhibition EC10 Desmodesmus subspicatus (green algae): 42.2 mg/l; 72 h

Analytical monitoring: yes

OECD Test Guideline 201

##### *Biodegradability*

0 %; 28 d; aerobic

OECD Test Guideline 301F

Not readily biodegradable.

##### *Partition coefficient: n-octanol/water*

log Pow: 1.8 (23 °C)

OECD Test Guideline 107

Bioaccumulation is not expected.

##### *Surface tension*

65.4 mN/m

at 20 °C

Method: OECD Test Guideline 115

similar to water

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### 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	UN3316
Proper shipping name	CHEMICAL KIT
Class	9
Packing group	III
Environmentally hazardous	--

#### Air transport (IATA)

UN number	UN 3316
Proper shipping name	CHEMICAL KIT
Class	9



Packing group	III
Environmentally hazardous	--
Special precautions for user	no

**Sea transport (IMDG)**

UN number	UN 3316
Proper shipping name	CHEMICAL KIT
Class	9
Packing group	III
Environmentally hazardous	--
Special precautions for user	yes
EmS	F-A S-P

THIS TRANSPORT DATA APPLIES TO THE ENTIRE PACK!

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**SECTION 15. Regulatory information**

**United States of America**

**Canada**

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.

**Notification status**

TSCA:	All components of the product are listed in the TSCA-inventory.
DSL:	All components of this product are on the Canadian DSL
CEPA:	Not in compliance with the inventory
ENCS:	On the inventory, or in compliance with the inventory
ISHL:	Not in compliance with the inventory
KOREA:	On the inventory, or in compliance with the inventory
PHIL:	On the inventory, or in compliance with the inventory
:	On the inventory, or in compliance with the inventory

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**SECTION 16. Other information**

**Training advice**

Provide adequate information, instruction and training for operators.

**Labeling**

*Hazard pictograms*



*Signal Word*

Warning

*Hazard Statements*

H290 May be corrosive to metals.

H317 May cause an allergic skin reaction.

H319 Causes serious eye irritation.

*Precautionary Statements*

Prevention

P280 Wear protective gloves.

Response

P302 + P352 IF ON SKIN: Wash with plenty of soap and water.

P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

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

H290 May be corrosive to metals.

H317 May cause an allergic skin reaction.

H319 Causes serious eye irritation.

**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](http://www.wikipedia.org).

Revision Date 06/13/2018

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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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