



Be Right™

# SAFETY DATA SHEET

Issue Date 07-Feb-2019

Revision Date 26-Jan-2024

Version 3.3

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## 1. IDENTIFICATION

### Product identifier

**Product Name** HgEx™ Reagent B Sulfuric Acid Solution

### Other means of identification

**Product Code(s)** 2658949

**Safety data sheet number** M01376

**UN/ID no** UN3264

### Recommended use of the chemical and restrictions on use

**Recommended Use** Determination of mercury. Standard solution.

**Uses advised against** None.

**Restrictions on use** None.

### Details of the supplier of the safety data sheet

#### **Manufacturer Address**

Hach Company, P.O.Box 389, Loveland, CO 80539, USA, +1(970) 669-3050

#### **Emergency telephone number**

+1(303) 623-5716 - 24 Hour Service

## 2. HAZARDS IDENTIFICATION

### Classification

#### **Regulatory Status**

This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Corrosive to metals	Category 1
Skin corrosion/irritation	Category 2
Serious eye damage/eye irritation	Category 1

### **Hazards not otherwise classified (HNOC)**

Not applicable

### **Label elements**

#### **Signal word**

Danger



#### Hazard statements

H290 - May be corrosive to metals  
H315 - Causes skin irritation  
H318 - Causes serious eye damage

#### Precautionary statements

P280 - Wear protective gloves, protective clothing, eye protection, and face protection  
P302 + P352 - IF ON SKIN: Wash with plenty of soap and water  
P332 + P313 - If skin irritation occurs: Get medical attention  
P362 - Take off contaminated clothing and wash before reuse  
P305 + P351 + P338 - 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  
P234 - Keep only in original container  
P390 - Absorb spillage to prevent material damage

#### Other Hazards Known

None

### 3. COMPOSITION/INFORMATION ON INGREDIENTS

#### Substance

Not applicable

#### Mixture

Chemical Family Mixture.

Percent ranges are used where confidential product information is applicable.

Chemical name	CAS No	Percent Range	HMRIC #
Sulfuric acid	7664-93-9	<1%	-

### 4. FIRST AID MEASURES

#### Description of first aid measures

##### General advice

Show this safety data sheet to the doctor in attendance. Immediate medical attention is required.

##### Inhalation

Remove to fresh air. Get medical attention immediately if symptoms occur.

##### Eye contact

Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Keep eye wide open while rinsing. Do not rub affected area. Get immediate medical advice/attention.

##### Skin contact

Wash off immediately with soap and plenty of water for at least 15 minutes. Get medical attention if irritation develops and persists.

##### Ingestion

Clean mouth with water and drink afterwards plenty of water. Never give anything by mouth to an unconscious person. Do NOT induce vomiting. Call a physician.

**Self-protection of the first aider** Avoid contact with skin, eyes or clothing.

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

**Symptoms** Burning sensation.

**Indication of any immediate medical attention and special treatment needed**

**Note to physicians** Treat symptomatically.

## 5. FIRE-FIGHTING MEASURES

**Suitable Extinguishing Media** Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

**Unsuitable Extinguishing Media** Caution: Use of water spray when fighting fire may be inefficient.

**Specific hazards arising from the chemical** No information available.

**Hazardous combustion products** This material will not burn.

**Special protective equipment for fire-fighters** Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear. Use personal protection equipment.

## 6. ACCIDENTAL RELEASE MEASURES

**U.S. Notice** Only persons properly qualified to respond to an emergency involving hazardous substances may respond to a spill according to federal regulations (OSHA 29 CFR 1910.120(a)(v)) and per your company's emergency response plan and guidelines/procedures. See Section 13, Special Instructions for disposal assistance. Outside of the US, only persons properly qualified according to state or local regulations should respond to a spill involving chemicals.

**Personal precautions, protective equipment and emergency procedures**

**Personal precautions** Avoid contact with skin, eyes or clothing. Ensure adequate ventilation. Use personal protective equipment as required.

**Other Information** Refer to protective measures listed in Sections 7 and 8.

**Environmental precautions**

**Environmental precautions** Prevent further leakage or spillage if safe to do so.

**Methods and material for containment and cleaning up**

**Methods for containment** Prevent further leakage or spillage if safe to do so.

**Methods for cleaning up** Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust). Take up mechanically, placing in appropriate containers for disposal.

**Prevention of secondary hazards** Clean contaminated objects and areas thoroughly observing environmental regulations.

**Reference to other sections** See section 8 for more information. See section 13 for more information.

## 7. HANDLING AND STORAGE

### Precautions for safe handling

**Advice on safe handling** Handle in accordance with good industrial hygiene and safety practice. Avoid contact with skin, eyes or clothing. Do not eat, drink or smoke when using this product. Take off contaminated clothing and wash before reuse.

### Conditions for safe storage, including any incompatibilities

**Storage Conditions** Keep containers tightly closed in a dry, cool and well-ventilated place. Protect from moisture. Store locked up. Keep out of the reach of children. Store away from other materials.

**Flammability class** Not applicable

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

### Control parameters

#### Exposure Guidelines

Chemical name	ACGIH TLV	OSHA PEL	NIOSH
Sulfuric acid CAS#: 7664-93-9	TWA: 0.2 mg/m <sup>3</sup> thoracic particulate matter	TWA: 1 mg/m <sup>3</sup> (vacated) TWA: 1 mg/m <sup>3</sup>	IDLH: 15 mg/m <sup>3</sup> TWA: 1 mg/m <sup>3</sup>

### Appropriate engineering controls

**Engineering Controls** Showers  
Eyewash stations  
Ventilation systems.

### Individual protection measures, such as personal protective equipment

**Respiratory protection** No protective equipment is needed under normal use conditions. If exposure limits are exceeded or irritation is experienced, ventilation and evacuation may be required.

**Hand Protection** Wear suitable gloves. Impervious gloves. Barrier creams may help to protect the exposed areas of skin. Gloves must be inspected prior to use. The selected protective gloves have to satisfy the specifications of EU Directive 2016/425 and the standard EN 374 derived from it. Chemical resistant gloves made of butyl rubber or nitrile rubber category III according to EN 374-1:2016.

**Eye/face protection** Tight sealing safety goggles.

**Skin and body protection** Wear suitable protective clothing. Long sleeved clothing.

**General Hygiene Considerations** Wear suitable gloves and eye/face protection. Do not eat, drink or smoke when using this product. Regular cleaning of equipment, work area and clothing is recommended. Avoid contact with skin, eyes or clothing.

**Environmental exposure controls** Local authorities should be advised if significant spillages cannot be contained. Do not allow into any sewer, on the ground or into any body of water.

**Thermal hazards** None under normal processing.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

### Information on basic physical and chemical properties

**Physical state** Liquid

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**Appearance** aqueous solution  
**Odor** Odorless

**Color** colorless  
**Odor threshold** No data available

<u>Property</u>	<u>Values</u>	<u>Remarks • Method</u>
<b>Molecular weight</b>	No data available	
<b>pH</b>	1.4	@ 20 °C
<b>Melting point / freezing point</b>	~ 0 °C / 32 °F	
<b>Initial boiling point and boiling range</b>	~ 100 °C / 212 °F	
<b>Evaporation rate</b>	1 (water = 1) 1	
<b>Vapor pressure</b>	17.477 mm Hg / 2.33 kPa at 20 °C / 68 °F	
<b>Relative vapor density</b>	0.62	
<b>Specific gravity - VALUE 1</b>	0.99	
<b>Partition coefficient</b>	Not applicable	
<b>Soil Organic Carbon-Water Partition Coefficient</b>	Not applicable	
<b>Autoignition temperature</b>	No data available	
<b>Decomposition temperature</b>	No data available	
<b>Dynamic viscosity</b>	~ 1 cP (mPa s) at 20 °C / 68 °F	
<b>Kinematic viscosity</b>	~ 1.01 cSt (mm <sup>2</sup> /s) at 20 °C / 68 °F	

#### Solubility(ies)

##### **Water solubility**

<u>Water solubility classification</u>	<u>Water solubility</u>	<u>Water Solubility Temperature</u>
Soluble	> 1000 mg/L	25 °C / 77 °F

##### **Solubility in other solvents**

<u>Chemical Name</u>	<u>Solubility classification</u>	<u>Solubility</u>	<u>Solubility Temperature</u>
Acid	Soluble	> 1000 mg/L	25 °C / 77 °F
Ethyl alcohol	Soluble	> 1000 mg/L	25 °C / 77 °F

#### Other information

##### **Metal Corrosivity**

**Steel Corrosion Rate** 3.96 mm/yr / 0.16 in/yr  
**Aluminum Corrosion Rate** 3.45 mm/yr / 0.14 in/yr

##### **Volatile Organic Compounds (VOC) Content**

<u>Chemical name</u>	<u>CAS No</u>	<u>Volatile organic compounds (VOC) content</u>	<u>CAA (Clean Air Act)</u>
Sulfuric acid	7664-93-9	No data available	-

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#### Explosive properties

**Upper explosion limit** No data available  
**Lower explosion limit** No data available

#### Flammable properties

**Flash point** No data available

#### Flammability Limit in Air

**Upper flammability limit:** No data available  
**Lower flammability limit:** No data available

#### Oxidizing properties

No data available.

#### Bulk density

No data available

## 10. STABILITY AND REACTIVITY

#### Reactivity

Corrosive on contact with water. Corrosive to metal.

#### Chemical stability

Stable under normal conditions.

#### Explosion data

**Sensitivity to Mechanical Impact** None.

**Sensitivity to Static Discharge** None.

#### Possibility of hazardous reactions

None under normal processing.

#### Hazardous polymerization

None under normal processing.

#### Conditions to avoid

Exposure to air or moisture over prolonged periods.

#### Incompatible materials

Oxidizing agent. Strong acids. Strong bases.

#### Hazardous decomposition products

Thermal decomposition can lead to release of irritating and toxic gases and vapors.

## 11. TOXICOLOGICAL INFORMATION

#### Information on likely routes of exposure

#### Product Information

<b>Inhalation</b>	May cause irritation of respiratory tract.
<b>Eye contact</b>	Severely irritating to eyes. Causes serious eye damage. May cause burns. May cause irreversible damage to eyes.
<b>Skin contact</b>	Causes skin irritation.
<b>Ingestion</b>	Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea.

**Symptoms** Redness. Burning. May cause blindness. May cause redness and tearing of the eyes.

**Acute toxicity**

Based on available data, the classification criteria are not met

**Mixture**

No data available.

**Ingredient Acute Toxicity Data**

No data available.

**Unknown Acute Toxicity**

0% of the mixture consists of ingredient(s) of unknown toxicity.

**Acute Toxicity Estimations (ATE)**

ATEmix (oral)	No information available
ATEmix (dermal)	No information available
ATEmix (inhalation-dust/mist)	No information available
ATEmix (inhalation-vapor)	No information available
ATEmix (inhalation-gas)	No information available

**Skin corrosion/irritation**

Classification based on data available for ingredients. Irritating to skin.

**Mixture**

No data available.

**Ingredient Skin Corrosion/Irritation Data**

Test data reported below.

Chemical name	Test method	Species	Reported dose	Exposure time	Results	Key literature references and sources for data
Sulfuric acid (<1%) CAS#: 7664-93-9	Existing human experience	Human	None reported	None reported	Corrosive to skin	HSDB

**Serious eye damage/irritation**

Classification based on data available for ingredients. Causes burns. Risk of serious damage to eyes.

**Mixture**

No data available.

**Ingredient Eye Damage/Eye Irritation Data**

Test data reported below.

Chemical name	Test method	Species	Reported dose	Exposure time	Results	Key literature references and sources for data
Sulfuric acid (<1%) CAS#: 7664-93-9	Existing human experience	Human	None reported	None reported	Corrosive to eyes	HSDB

**Respiratory or skin sensitization**

Based on available data, the classification criteria are not met.

**Mixture**

No data available.

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#### Ingredient Sensitization Data

No data available.

#### STOT - single exposure

Based on available data, the classification criteria are not met.

#### Mixture

No data available.

#### Ingredient Specific Target Organ Toxicity Single Exposure Data

Test data reported below.

#### Inhalation (Vapor) Exposure Route

Chemical name	Endpoint type	Reported dose	Exposure time	Toxicological effects	Key literature references and sources for data
Sulfuric acid (<1%) CAS#: 7664-93-9	Human TD <sub>Lo</sub>	0.144 mg/L	5 minutes	Lungs, Thorax, or Respiration Dyspnea	RTECS

#### STOT - repeated exposure

Based on available data, the classification criteria are not met.

#### Mixture

No data available.

#### Ingredient Specific Target Organ Toxicity Repeat Exposure Data

Test data reported below.

#### Inhalation (Vapor) Exposure Route

Chemical name	Endpoint type	Reported dose	Exposure time	Toxicological effects	Key literature references and sources for data
Sulfuric acid (<1%) CAS#: 7664-93-9	Human TC <sub>Lo</sub>	0.003 mg/L	168 days	Musculoskeletal Changes in teeth and supporting structures	RTECS

#### Carcinogenicity

Based on available data, the classification criteria are not met.

#### Mixture

No data available.

#### Ingredient Carcinogenicity Data

No data available.

Chemical name	CAS No	ACGIH	IARC	NTP	OSHA
Sulfuric acid	7664-93-9	A2	Group 1	Known	X

#### Legend

<b>ACGIH (American Conference of Governmental Industrial Hygienists)</b>	A2 - Suspected Human Carcinogen
<b>IARC (International Agency for Research on Cancer)</b>	Group 1 - Carcinogenic to Humans
<b>NTP (National Toxicology Program)</b>	Known - Known Carcinogen
<b>OSHA</b>	X - Present

#### Germ cell mutagenicity

Based on available data, the classification criteria are not met.

#### Mixture invitro Data

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No data available.

**Substance invitro Data**  
Test data reported below.

Chemical name	Test	Cell Strain	Reported dose	Exposure time	Results	Key literature references and sources for data
Sulfuric acid (<1%) CAS#: 7664-93-9	Cytogenetic analysis	Hamster ovary	4 mmol/L	None reported	Positive test result for mutagenicity	No information available

**Mixture invivo Data**  
No data available.

**Substance invivo Data**  
No data available.

**Reproductive toxicity**  
Based on available data, the classification criteria are not met.

**Mixture**  
No data available.

**Ingredient Reproductive Toxicity Data**  
Test data reported below.

**Inhalation (Vapor) Exposure Route**

Chemical name	Endpoint type	Reported dose	Exposure time	Toxicological effects	Key literature references and sources for data
Sulfuric acid (<1%) CAS#: 7664-93-9	Rabbit TC <sub>Lo</sub>	0.02 mg/L	7 hours	Specific Developmental Abnormalities Musculoskeletal system	No information available

**Aspiration hazard**  
Based on available data, the classification criteria are not met.

## 12. ECOLOGICAL INFORMATION

**Ecotoxicity** Based on available data, the classification criteria are not met.

**Unknown aquatic toxicity** 0% of the mixture consists of components(s) of unknown hazards to the aquatic environment.

### Mixture

**Aquatic Acute Toxicity**  
No data available.

**Aquatic Chronic Toxicity**  
No data available.

### Substance

**Aquatic Acute Toxicity**  
No data available.

**Aquatic Chronic Toxicity**  
No data available.

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### Persistence and degradability

#### **Mixture**

No data available.

#### Bioaccumulation

MATERIAL DOES NOT BIOACCUMULATE

#### **Mixture**

No data available.

#### **Partition coefficient**

Not applicable

### Mobility

#### **Soil Organic Carbon-Water Partition Coefficient**

Not applicable

#### **Other adverse effects**

No information available

## 13. DISPOSAL CONSIDERATIONS

### Waste treatment methods

#### **Waste from residues/unused products**

Dispose of in accordance with local regulations. Dispose of waste in accordance with environmental legislation.

#### **Contaminated packaging**

Do not reuse empty containers.

#### **US EPA Waste Number**

D002

#### **Special instructions for disposal**

Dilute to 3 to 5 times the volume with cold water. Adjust to a pH between 6 and 9 with an alkali, such as soda ash or sodium bicarbonate. If permitted by regulation. Open cold water tap completely, slowly pour the reacted material to the drain. Flush system with plenty of water. Check with local municipal and state authorities and waste contractors for pertinent local information regarding the proper disposal of chemicals.

## 14. TRANSPORT INFORMATION

### DOT

<b>UN/ID no</b>	UN3264
<b>Proper shipping name</b>	CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S.
<b>DOT Technical Name</b>	Sulfuric acid
<b>Transport hazard class(es)</b>	8
<b>Packing Group</b>	III
<b>Emergency Response Guide Number</b>	154

### TDG

<b>UN/ID no</b>	UN3264
<b>Proper shipping name</b>	CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S.
<b>TDG Technical Name</b>	Sulfuric acid
<b>Transport hazard class(es)</b>	8
<b>Packing Group</b>	III

### IATA

<b>UN number or ID number</b>	UN3264
<b>Proper shipping name</b>	Corrosive liquid, acidic, inorganic, n.o.s.
<b>IATA Technical Name</b>	Sulfuric acid

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Transport hazard class(es) 8  
Packing group III  
ERG Code 8L

**IMDG**

UN number or ID number UN3264  
Proper shipping name CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S.  
IMDG Technical Name Sulfuric acid  
Transport hazard class(es) 8  
Packing Group III  
EmS-No F-A, S-B  
Special Provisions 223, 274

**Note:** No special precautions necessary.

**Additional information**

There is a possibility that this product could be contained in a reagent set or kit composed of various compatible dangerous goods. If the item is not in a reagent set or kit, the classification given above applies. If the item is part of a reagent set or kit the classification would change to the following: UN3316 Chemical Kit, Hazard Class 9, Packing Group II or III. If the item is not regulated, the Chemical Kit classification does not apply.

**15. REGULATORY INFORMATION**

**National Inventories**

TSCA Complies  
DSL/NDSL Complies

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory  
DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List

**International Inventories**

EINECS/ELINCS Complies  
ENCS Complies  
IECSC Complies  
KECL Complies  
PICCS Complies  
TCSI Complies  
AICS Complies  
NZIoC Complies

EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances  
ENCS - Japan Existing and New Chemical Substances  
IECSC - China Inventory of Existing Chemical Substances  
KECL - Korean Existing and Evaluated Chemical Substances  
PICCS - Philippines Inventory of Chemicals and Chemical Substances  
TCSI - Taiwan Chemical Substances Inventory  
AICS - Australian Inventory of Chemical Substances  
NZIoC - New Zealand Inventory of Chemicals

**US Federal Regulations**

**SARA 313**

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

Chemical name	SARA 313 - Threshold Values %
Sulfuric acid (CAS #: 7664-93-9)	1.0

**SARA 311/312 Hazard Categories**

Acute health hazard Yes  
Chronic Health Hazard Yes

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Fire hazard No  
 Sudden release of pressure hazard No  
 Reactive Hazard No

**CWA (Clean Water Act)**

This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42)

Chemical name	CWA - Reportable Quantities	CWA - Toxic Pollutants	CWA - Priority Pollutants	CWA - Hazardous Substances
Sulfuric acid 7664-93-9	1000 lb	-	-	X

**CERCLA**

This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material

Chemical name	Hazardous Substances RQs	CERCLA/SARA RQ	Reportable Quantity (RQ)
Sulfuric acid 7664-93-9	1000 lb	1000 lb	RQ 1000 lb final RQ RQ 454 kg final RQ

**U.S. - DEA (Drug Enforcement Administration) List I & List II**

Chemical name	U.S. - DEA (Drug Enforcement Administration) - List I or Precursor Chemicals	U.S. - DEA (Drug Enforcement Administration) - List II or Essential Chemicals
Sulfuric acid (<1%) CAS#: 7664-93-9	Not Listed	50 gallon Export Volume (exports, transshipments and international transactions to designated countries given in 1310.08(b))

**US State Regulations**

**California Proposition 65**

This product contains the following Proposition 65 chemicals

Chemical name	California Proposition 65
Sulfuric acid (CAS #: 7664-93-9)	Carcinogen



**WARNING:** This product can expose you to chemicals including Sulfuric acid, which is known to the State of California to cause cancer.

For more information, go to <http://www.P65Warnings.ca.gov>

**U.S. State Right-to-Know Regulations**

This product may contain substances regulated by state right-to-know regulations.

Chemical name	New Jersey	Massachusetts	Pennsylvania
Sulfuric acid 7664-93-9	X	X	X

**U.S. EPA Label Information**

Chemical name	FIFRA	FDA
Sulfuric acid	180.0910	21 CFR 184.1095

**16. OTHER INFORMATION, INCLUDING DATE OF PREPARATION OF THE LAST REVISION**

**Special Comments**

None

**Additional information**

**Global Automotive Declarable Substance List (GADSL)**

Not applicable

**NFPA and HMIS Classifications**

<b>NFPA</b>	<b>Health hazards - 3</b>	<b>Flammability - 0</b>	<b>Instability - 0</b>	<b>Physical and chemical properties -</b>
<b>HMIS</b>	<b>Health hazards - 3</b>	<b>Flammability - 0</b>	<b>Physical hazards - 0</b>	<b>Personal protection -</b> X -1

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

ACGIH	ACGIH (American Conference of Governmental Industrial Hygienists)
ATSDR	ATSDR (Agency for Toxic Substances and Disease Registry)
CCRIS	CCRIS (Chemical Carcinogenesis Research Information System)
CDC	CDC (Center for Disease Control)
CEPA	CEPA (Canadian Environmental Protection Agency)
CICAD	CICAD (Concise International Chemical Assessment Documents)
ECHA	ECHA (The European Chemicals Agency)
EEA	EEA (European Environment Agency)
EPA	EPA (Environmental Protection Agency)
ERMA	ERMA (New Zealand's Environmental Risk Management Authority)
ECOSARS	Estimation through ECOSARS v1.11 part of the Estimation Programs Interface (EPI) Suite™
FDA	FDA (Food & Drug Administration)
GESTIS	GESTIS (Information System on Hazardous Substances of the German Social Accident Insurance)
HSDB	HSDB (Hazardous Substances Data Bank)
INERIS	INERIS (The National Industrial Environment and Risks Institute)
IPCS INCHEM	IPCS INCHEM (International Programme on Chemical Safety)
IUCLID	IUCLID (The International Uniform Chemical Information Database)
NITE	Japan National Institute of Technology and Evaluation (NITE)
NIH	NIH (National Institutes of Health)
NIOSH	NIOSH (National Institute for Occupational Safety and Health)
LOLI	LOLI (List of Lists - An International Chemical Regulatory Database)
NDF	no data
NICNAS	Australia National Industrial Chemicals Notification and Assessment Scheme (NICNAS)
NIOSH IDLH	Immediately Dangerous to Life or Health
OSHA	OSHA (Occupational Safety and Health Administration of the US Department of Labor)
PEEN	PEEN (Pan European Ecological Network)
RTECS	RTECS (Registry of Toxic Effects of Chemical Substances)
SIDS	SIDS (Screening Information Dataset) for High Volume Chemicals
SYKE	The Finnish Environment Institute (SYKE)
USDA	USDA (United States Department of Agriculture)
USDC	USDC (United States Department of Commerce)
WHO	WHO (World Health Organization)

**Legend - Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION**

TWA	TWA (time-weighted average)	STEL	STEL (Short Term Exposure Limit)
MAC	Maximum Allowable Concentration	Ceiling	Ceiling Limit Value
X	Listed	Vacated	These values have no official status. The only

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binding levels of contaminants are those listed in the final OSHA PEL. These lists are for reference purposes only. Please note that some reference state regulations of these "liberated" exposure limits in their state regulations.

SKN*	Skin designation	SKN+	Skin sensitization
RSP+	Respiratory sensitization	**	Hazard Designation
C	Carcinogen	R	Reproductive toxicant
M	mutagen		

**Prepared By** Hach Product Compliance Department

**Issue Date** 07-Feb-2019

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**Revision Note** None

**Disclaimer**

**USER RESPONSIBILITY:** Each user should read and understand this information and incorporate it in individual site safety programs in accordance with applicable hazard communication standards and regulations.

**THE INFORMATION CONTAINED HEREIN IS BASED ON DATA CONSIDERED TO BE ACCURATE. HOWEVER, NO WARRANTY IS EXPRESSED OR IMPLIED REGARDING THE ACCURACY OF THESE DATA OR THE RESULTS TO BE OBTAINED FROM THE USE THEREOF.**

HACH COMPANY©2023

**End of Safety Data Sheet**



**Be Right™**

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## 1. IDENTIFICATION

### Product identifier

**Product Name** HgEx™ Reagent 5

### Other means of identification

**Product Code(s)** 2658636

**Safety data sheet number** M00571

**UN/ID no** UN1824

### Recommended use of the chemical and restrictions on use

**Recommended Use** Laboratory reagent.

**Uses advised against** None.

**Restrictions on use** None.

### Details of the supplier of the safety data sheet

#### **Manufacturer Address**

Hach Company, P.O.Box 389, Loveland, CO 80539, USA, +1(970) 669-3050

#### **Emergency telephone number**

+1(303) 623-5716 - 24 Hour Service

## 2. HAZARDS IDENTIFICATION

### Classification

#### **Regulatory Status**

This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Corrosive to metals	Category 1
Skin corrosion/irritation	Category 1
Serious eye damage/eye irritation	Category 1

### Hazards not otherwise classified (HNOC)

Not applicable

### Label elements

#### **Signal word**

Danger



#### Hazard statements

H290 - May be corrosive to metals  
H314 - Causes severe skin burns and eye damage

#### Precautionary statements

P260 - Do not breathe dust/fume/gas/mist/vapors/spray  
P280 - Wear protective gloves, protective clothing, eye protection, and face protection  
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 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  
P310 - Immediately call a POISON CENTER or doctor/physician  
P363 - Wash contaminated clothing before reuse  
P405 - Store locked up  
P501 - Dispose of contents/ container to an approved waste disposal plant  
P234 - Keep only in original container  
P390 - Absorb spillage to prevent material damage

#### Other Hazards Known

Harmful to aquatic life

### 3. COMPOSITION/INFORMATION ON INGREDIENTS

#### Substance

Not applicable

#### Mixture

Chemical Family Mixture.

Percent ranges are used where confidential product information is applicable.

Chemical name	CAS No	Percent Range	HMRIC #
Sodium hydroxide	1310-73-2	50 - 60%	-

### 4. FIRST AID MEASURES

#### Description of first aid measures

##### General advice

Show this safety data sheet to the doctor in attendance. Immediate medical attention is required.

##### Inhalation

Remove to fresh air. If breathing has stopped, give artificial respiration. Get medical attention immediately. Do not use mouth-to-mouth method if victim ingested or inhaled the substance; give artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. If breathing is difficult, (trained personnel should) give oxygen. Delayed pulmonary edema may occur. Get immediate medical advice/attention.

##### Eye contact

Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Keep eye wide open



while rinsing. Do not rub affected area. Get immediate medical advice/attention.

<b>Skin contact</b>	Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. Get immediate medical advice/attention.
<b>Ingestion</b>	Clean mouth with water and drink afterwards plenty of water. Never give anything by mouth to an unconscious person. Do NOT induce vomiting. Get immediate medical advice/attention.
<b>Self-protection of the first aider</b>	Avoid contact with skin, eyes or clothing. Ensure that medical personnel are aware of the material(s) involved, take precautions to protect themselves and prevent spread of contamination. Avoid direct contact with skin. Use barrier to give mouth-to-mouth resuscitation.

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

**Symptoms** Burning sensation.

#### **Indication of any immediate medical attention and special treatment needed**

**Note to physicians** Product is a corrosive material. Use of gastric lavage or emesis is contraindicated. Possible perforation of stomach or esophagus should be investigated. Do not give chemical antidotes. Asphyxia from glottal edema may occur. Marked decrease in blood pressure may occur with moist rales, frothy sputum, and high pulse pressure.

### **5. FIRE-FIGHTING MEASURES**

<b>Suitable Extinguishing Media</b>	Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
<b>Unsuitable Extinguishing Media</b>	Caution: Use of water spray when fighting fire may be inefficient.
<b>Specific hazards arising from the chemical</b>	The product causes burns of eyes, skin and mucous membranes. Thermal decomposition can lead to release of irritating gases and vapors.
<b>Hazardous combustion products</b>	This material will not burn.
<b>Special protective equipment for fire-fighters</b>	Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear. Use personal protection equipment.

### **6. ACCIDENTAL RELEASE MEASURES**

**U.S. Notice** Only persons properly qualified to respond to an emergency involving hazardous substances may respond to a spill according to federal regulations (OSHA 29 CFR 1910.120(a)(v)) and per your company's emergency response plan and guidelines/procedures. See Section 13, Special Instructions for disposal assistance. Outside of the US, only persons properly qualified according to state or local regulations should respond to a spill involving chemicals.

#### **Personal precautions, protective equipment and emergency procedures**

**Personal precautions** Avoid contact with skin, eyes or clothing. Ensure adequate ventilation. Use personal protective equipment as required. Attention! Corrosive material. Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak.

**Other Information** Refer to protective measures listed in Sections 7 and 8.

#### **Environmental precautions**

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**Environmental precautions** Prevent further leakage or spillage if safe to do so. Should not be released into the environment. Do not allow to enter into soil/subsoil. Prevent product from entering drains.

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

**Methods for containment** Prevent further leakage or spillage if safe to do so.

**Methods for cleaning up** Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust). Take up mechanically, placing in appropriate containers for disposal.

**Prevention of secondary hazards** Clean contaminated objects and areas thoroughly observing environmental regulations.

**Reference to other sections** See section 8 for more information. See section 13 for more information.

## **7. HANDLING AND STORAGE**

### **Precautions for safe handling**

**Advice on safe handling** Handle in accordance with good industrial hygiene and safety practice. Avoid contact with skin, eyes or clothing. In case of insufficient ventilation, wear suitable respiratory equipment. Handle product only in closed system or provide appropriate exhaust ventilation. Do not eat, drink or smoke when using this product. Take off contaminated clothing and wash before reuse.

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

**Storage Conditions** Keep containers tightly closed in a dry, cool and well-ventilated place. Protect from moisture. Store locked up. Keep out of the reach of children. Store away from other materials.

**Flammability class** Not applicable

## **8. EXPOSURE CONTROLS/PERSONAL PROTECTION**

### **Control parameters**

#### **Exposure Guidelines**

<b>Chemical name</b>	<b>ACGIH TLV</b>	<b>OSHA PEL</b>	<b>NIOSH</b>
Sodium hydroxide CAS#: 1310-73-2	Ceiling: 2 mg/m <sup>3</sup>	TWA: 2 mg/m <sup>3</sup> (vacated) Ceiling: 2 mg/m <sup>3</sup>	IDLH: 10 mg/m <sup>3</sup> Ceiling: 2 mg/m <sup>3</sup>

### **Appropriate engineering controls**

**Engineering Controls** Showers  
Eyewash stations  
Ventilation systems.

### **Individual protection measures, such as personal protective equipment**

**Respiratory protection** No protective equipment is needed under normal use conditions. If exposure limits are exceeded or irritation is experienced, ventilation and evacuation may be required.

**Hand Protection** Wear suitable gloves. Impervious gloves. Barrier creams may help to protect the exposed areas of skin. Gloves must be inspected prior to use. The selected protective gloves have to satisfy the specifications of EU Directive 2016/425 and the standard EN 374 derived from it. Chemical resistant gloves made of butyl rubber or nitrile rubber category III according to EN 374-1:2016.

**Eye/face protection** Face protection shield.

<b>Skin and body protection</b>	Wear suitable protective clothing. Long sleeved clothing. Chemical resistant apron. Wash contaminated clothing before reuse. Avoid contact with eyes, skin and clothing.
<b>General Hygiene Considerations</b>	Wear suitable gloves and eye/face protection. Do not eat, drink or smoke when using this product. Regular cleaning of equipment, work area and clothing is recommended. Avoid contact with skin, eyes or clothing. Remove and wash contaminated clothing and gloves, including the inside, before re-use. Contaminated work clothing should not be allowed out of the workplace. Wash hands before breaks and immediately after handling the product.
<b>Environmental exposure controls</b>	Local authorities should be advised if significant spillages cannot be contained. Do not allow into any sewer, on the ground or into any body of water.
<b>Thermal hazards</b>	None under normal processing.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

### Information on basic physical and chemical properties

<b>Physical state</b>	Liquid	<b>Color</b>	colorless
<b>Appearance</b>	aqueous solution	<b>Odor threshold</b>	No data available
<b>Odor</b>	Odorless		

<u>Property</u>	<u>Values</u>	<u>Remarks • Method</u>
<b>Molecular weight</b>	No data available	
<b>pH</b>	14	@ 20 °C
<b>Melting point / freezing point</b>	12 °C / 53.6 °F	
<b>Initial boiling point and boiling range</b>	145 °C / 293 °F	
<b>Evaporation rate</b>	0.5 (water = 1)	
<b>Vapor pressure</b>	12.976 mm Hg / 1.73 kPa at 60 °C / 140 °F	
<b>Relative vapor density</b>	0.86	
<b>Specific gravity - VALUE 1</b>	1.530	
<b>Partition coefficient</b>	Not applicable	
<b>Soil Organic Carbon-Water Partition Coefficient</b>	Not applicable	
<b>Autoignition temperature</b>	No data available	
<b>Decomposition temperature</b>	No data available	
<b>Dynamic viscosity</b>	79 cP (mPa s) at 20 °C / 68 °F	
<b>Kinematic viscosity</b>	51.634 cSt (mm <sup>2</sup> /s) at 20 °C / 68 °F	

### Solubility(ies)

#### **Water solubility**

<u>Water solubility classification</u>	<u>Water solubility</u>	<u>Water Solubility Temperature</u>
Soluble	> 1000 mg/L	25 °C / 77 °F

#### **Solubility in other solvents**

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<u>Chemical Name</u>	<u>Solubility classification</u>	<u>Solubility</u>	<u>Solubility Temperature</u>
Acid	Soluble	> 1000 mg/L	25 °C / 77 °F
Glycerol	Soluble	> 1000 mg/L	25 °C / 77 °F
Methanol	Soluble	> 1000 mg/L	25 °C / 77 °F

#### **Other information**

##### **Metal Corrosivity**

Classified as corrosive to metal according to GHS criteria

**Steel Corrosion Rate**

> 6.25 mm/yr / > 0.25 in/yr

**Aluminum Corrosion Rate**

> 6.25 mm/yr / > 0.25 in/yr

##### **Volatile Organic Compounds (VOC) Content**

<b>Chemical name</b>	<b>CAS No</b>	<b>Volatile organic compounds (VOC) content</b>	<b>CAA (Clean Air Act)</b>
Sodium hydroxide	1310-73-2	No data available	-

##### **Explosive properties**

**Upper explosion limit**

No data available

**Lower explosion limit**

No data available

##### **Flammable properties**

**Flash point**

No data available

##### **Flammability Limit in Air**

**Upper flammability limit:**

No data available

**Lower flammability limit:**

No data available

##### **Oxidizing properties**

No data available.

##### **Bulk density**

No data available

## **10. STABILITY AND REACTIVITY**

##### **Reactivity**

Corrosive on contact with water. Corrosive to metal.

##### **Chemical stability**

Stable under normal conditions.

##### **Explosion data**

**Sensitivity to Mechanical Impact** None.

**Sensitivity to Static Discharge** None.

##### **Possibility of hazardous reactions**

None under normal processing.

##### **Hazardous polymerization**

None under normal processing.

##### **Conditions to avoid**

Exposure to air or moisture over prolonged periods.

**Incompatible materials**

Oxidizing agent. Acids. Bases.

**Hazardous decomposition products**

Thermal decomposition can lead to release of irritating and toxic gases and vapors.

**11. TOXICOLOGICAL INFORMATION**

**Information on likely routes of exposure**

**Product Information**

<b>Inhalation</b>	Corrosive by inhalation. Inhalation of corrosive fumes/gases may cause coughing, choking, headache, dizziness, and weakness for several hours. Pulmonary edema may occur with tightness in the chest, shortness of breath, bluish skin, decreased blood pressure, and increased heart rate. Inhaled corrosive substances can lead to a toxic edema of the lungs. Pulmonary edema can be fatal.
<b>Eye contact</b>	Causes burns. Corrosive to the eyes and may cause severe damage including blindness. Causes serious eye damage. May cause irreversible damage to eyes.
<b>Skin contact</b>	Corrosive. Causes severe burns. Avoid contact with skin and clothing.
<b>Ingestion</b>	Causes burns. Ingestion causes burns of the upper digestive and respiratory tracts. May cause severe burning pain in the mouth and stomach with vomiting and diarrhea of dark blood. Blood pressure may decrease. Brownish or yellowish stains may be seen around the mouth. Swelling of the throat may cause shortness of breath and choking. May cause lung damage if swallowed. May be fatal if swallowed and enters airways.

**Symptoms** Redness. Burning. May cause blindness. Coughing and/ or wheezing.

**Acute toxicity**

Based on available data, the classification criteria are not met

**Mixture**

No data available.

**Ingredient Acute Toxicity Data**

No data available.

**Unknown Acute Toxicity**

0% of the mixture consists of ingredient(s) of unknown toxicity.

**Acute Toxicity Estimations (ATE)**

<b>ATEmix (oral)</b>	No information available
<b>ATEmix (dermal)</b>	No information available
<b>ATEmix (inhalation-dust/mist)</b>	No information available
<b>ATEmix (inhalation-vapor)</b>	No information available
<b>ATEmix (inhalation-gas)</b>	No information available

**Skin corrosion/irritation**

Causes severe burns.

**Mixture**

No data available.

**Ingredient Skin Corrosion/Irritation Data**

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Test data reported below.

Chemical name	Test method	Species	Reported dose	Exposure time	Results	Key literature references and sources for data
Sodium hydroxide (50 - 60%) CAS#: 1310-73-2	Patch test	Human	20 mg	24 hours	Corrosive to skin	RTECS

**Serious eye damage/irritation**

Classification based on data available for ingredients. Causes burns. Risk of serious damage to eyes.

**Mixture**

No data available.

**Ingredient Eye Damage/Eye Irritation Data**

Test data reported below.

Chemical name	Test method	Species	Reported dose	Exposure time	Results	Key literature references and sources for data
Sodium hydroxide (50 - 60%) CAS#: 1310-73-2	Standard Draize Test	Rabbit	0.05 mg	24 hours	Corrosive to eyes	RTECS

**Respiratory or skin sensitization**

Based on available data, the classification criteria are not met.

**Mixture**

No data available.

**Ingredient Sensitization Data**

No data available.

**STOT - single exposure**

Based on available data, the classification criteria are not met.

**Mixture**

No data available.

**Ingredient Specific Target Organ Toxicity Single Exposure Data**

No data available.

**STOT - repeated exposure**

Based on available data, the classification criteria are not met.

**Mixture**

No data available.

**Ingredient Specific Target Organ Toxicity Repeat Exposure Data**

No data available.

**Carcinogenicity**

Based on available data, the classification criteria are not met.

**Mixture**

No data available.

**Ingredient Carcinogenicity Data**

No data available.

Chemical name	CAS No	ACGIH	IARC	NTP	OSHA
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Sodium hydroxide	1310-73-2	-	-	-	-
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**Legend**

<b>ACGIH (American Conference of Governmental Industrial Hygienists)</b>	Does not apply
<b>IARC (International Agency for Research on Cancer)</b>	Does not apply
<b>NTP (National Toxicology Program)</b>	Does not apply
<b>OSHA</b>	Does not apply

**Germ cell mutagenicity**

Based on available data, the classification criteria are not met.

**Mixture invitro Data**

No data available.

**Substance invitro Data**

No data available.

**Mixture invivo Data**

No data available.

**Substance invivo Data**

No data available.

**Reproductive toxicity**

Based on available data, the classification criteria are not met.

**Mixture**

No data available.

**Ingredient Reproductive Toxicity Data**

No data available.

**Aspiration hazard**

Based on available data, the classification criteria are not met.

**12. ECOLOGICAL INFORMATION**

**Ecotoxicity**

Based on available data, the classification criteria are not met.

**Unknown aquatic toxicity**

0% of the mixture consists of components(s) of unknown hazards to the aquatic environment.

**Mixture**

**Aquatic Acute Toxicity**

No data available.

**Aquatic Chronic Toxicity**

No data available.

**Substance**

**Aquatic Acute Toxicity**

Test data reported below.

**Fish**

Chemical name	Exposure time	Species	Endpoint type	Reported dose	Key literature references and sources for data
Sodium hydroxide	96 hours	<i>Oncorhynchus mykiss</i>	LC <sub>50</sub>	45.4 mg/L	IUCLID

(50 - 60%) CAS#: 1310-73-2					
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**Crustacea**

Chemical name	Exposure time	Species	Endpoint type	Reported dose	Key literature references and sources for data
Sodium hydroxide (50 - 60%) CAS#: 1310-73-2	48 Hours	<i>Daphnia sp.</i>	EC <sub>50</sub>	40.4 mg/L	IUCLID

**Aquatic Chronic Toxicity**

No data available.

**Persistence and degradability**

**Mixture**

No data available.

**Mixture**

No data available.

**Partition coefficient**

Not applicable

**Mobility**

**Soil Organic Carbon-Water Partition Coefficient**

Not applicable

**Other adverse effects**

No information available

**13. DISPOSAL CONSIDERATIONS**

**Waste treatment methods**

**Waste from residues/unused products**

Dispose of in accordance with local regulations. Dispose of waste in accordance with environmental legislation.

**Contaminated packaging**

Do not reuse empty containers.

**US EPA Waste Number**

D002

**Special instructions for disposal**

Dilute to 3 to 5 times the volume with cold water. Adjust to a pH between 6 and 9 with an acid, such as sulfuric or citric. If permitted by regulation. Open cold water tap completely, slowly pour the reacted material to the drain. Allow cold water to run for 5 minutes to completely flush the system. Check with local municipal and state authorities and waste contractors for pertinent local information regarding the proper disposal of chemicals.

**14. TRANSPORT INFORMATION**

**DOT**

UN/ID no UN1824  
 Proper shipping name Sodium Hydroxide Solution  
 Transport hazard class(es) 8  
 Packing Group II  
 Emergency Response Guide Number 154



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#### TDG

<b>UN/ID no</b>	UN1824
<b>Proper shipping name</b>	Sodium Hydroxide Solution
<b>Transport hazard class(es)</b>	8
<b>Packing Group</b>	II

#### IATA

<b>UN number or ID number</b>	UN1824
<b>Proper shipping name</b>	Sodium Hydroxide Solution
<b>Transport hazard class(es)</b>	8
<b>Packing group</b>	II
<b>ERG Code</b>	154

#### IMDG

<b>UN number or ID number</b>	UN1824
<b>Proper shipping name</b>	Sodium Hydroxide Solution
<b>Transport hazard class(es)</b>	8
<b>Packing Group</b>	II

**Note:** No special precautions necessary.

#### **Additional information**

There is a possibility that this product could be contained in a reagent set or kit composed of various compatible dangerous goods. If the item is not in a reagent set or kit, the classification given above applies. If the item is part of a reagent set or kit the classification would change to the following: UN3316 Chemical Kit, Hazard Class 9, Packing Group II or III. If the item is not regulated, the Chemical Kit classification does not apply.

## 15. REGULATORY INFORMATION

#### National Inventories

<b>TSCA</b>	Complies
<b>DSL/NDSL</b>	Complies

**TSCA** - United States Toxic Substances Control Act Section 8(b) Inventory  
**DSL/NDSL** - Canadian Domestic Substances List/Non-Domestic Substances List

#### International Inventories

<b>EINECS/ELINCS</b>	Complies
<b>ENCS</b>	Complies
<b>IECSC</b>	Complies
<b>KECL</b>	Complies
<b>PICCS</b>	Complies
<b>TCSI</b>	Complies
<b>AICS</b>	Complies
<b>NZIoC</b>	Complies

**EINECS/ELINCS** - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances  
**ENCS** - Japan Existing and New Chemical Substances  
**IECSC** - China Inventory of Existing Chemical Substances  
**KECL** - Korean Existing and Evaluated Chemical Substances  
**PICCS** - Philippines Inventory of Chemicals and Chemical Substances  
**TCSI** - Taiwan Chemical Substances Inventory  
**AICS** - Australian Inventory of Chemical Substances  
**NZIoC** - New Zealand Inventory of Chemicals

#### US Federal Regulations

##### SARA 313

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

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**SARA 311/312 Hazard Categories**

Acute health hazard	Yes
Chronic Health Hazard	Yes
Fire hazard	No
Sudden release of pressure hazard	No
Reactive Hazard	No

**CWA (Clean Water Act)**

This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42)

Chemical name	CWA - Reportable Quantities	CWA - Toxic Pollutants	CWA - Priority Pollutants	CWA - Hazardous Substances
Sodium hydroxide 1310-73-2	1000 lb	-	-	X

**CERCLA**

This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material

Chemical name	Hazardous Substances RQs	CERCLA/SARA RQ	Reportable Quantity (RQ)
Sodium hydroxide 1310-73-2	1000 lb	-	RQ 1000 lb final RQ RQ 454 kg final RQ

**US State Regulations**

**California Proposition 65**

This product does not contain any Proposition 65 chemicals

**U.S. State Right-to-Know Regulations**

This product may contain substances regulated by state right-to-know regulations.

Chemical name	New Jersey	Massachusetts	Pennsylvania
Sodium hydroxide 1310-73-2	X	X	X

**U.S. EPA Label Information**

Chemical name	FIFRA	FDA
Sodium hydroxide	180.0910	21 CFR 184.1763

**16. OTHER INFORMATION, INCLUDING DATE OF PREPARATION OF THE LAST REVISION**

**Special Comments**

None

**Additional information**

**Global Automotive Declarable Substance List (GADSL)**

Not applicable

**NFPA and HMIS Classifications**

NFPA	Health hazards - 3	Flammability - 0	Instability - 0	Physical and chemical properties -
HMIS	Health hazards - 3	Flammability - 0	Physical hazards - 0	Personal protection -

				X - I
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**Key or legend to abbreviations and acronyms used in the safety data sheet**

ACGIH	ACGIH (American Conference of Governmental Industrial Hygienists)
ATSDR	ATSDR (Agency for Toxic Substances and Disease Registry)
CCRIS	CCRIS (Chemical Carcinogenesis Research Information System)
CDC	CDC (Center for Disease Control)
CEPA	CEPA (Canadian Environmental Protection Agency)
CICAD	CICAD (Concise International Chemical Assessment Documents)
ECHA	ECHA (The European Chemicals Agency)
EEA	EEA (European Environment Agency)
EPA	EPA (Environmental Protection Agency)
ERMA	ERMA (New Zealand's Environmental Risk Management Authority)
ECOSARS	Estimation through ECOSARS v1.11 part of the Estimation Programs Interface (EPI) Suite™
FDA	FDA (Food & Drug Administration)
GESTIS	GESTIS (Information System on Hazardous Substances of the German Social Accident Insurance)
HSDB	HSDB (Hazardous Substances Data Bank)
INERIS	INERIS (The National Industrial Environment and Risks Institute)
IPCS INCHEM	IPCS INCHEM (International Programme on Chemical Safety)
IUCLID	IUCLID (The International Uniform Chemical Information Database)
NITE	Japan National Institute of Technology and Evaluation (NITE)
NIH	NIH (National Institutes of Health)
NIOSH	NIOSH (National Institute for Occupational Safety and Health)
LOLI	LOLI (List of Lists - An International Chemical Regulatory Database)
NDF	no data
NICNAS	Australia National Industrial Chemicals Notification and Assessment Scheme (NICNAS)
NIOSH IDLH	Immediately Dangerous to Life or Health
OSHA	OSHA (Occupational Safety and Health Administration of the US Department of Labor)
PEEN	PEEN (Pan European Ecological Network)
RTECS	RTECS (Registry of Toxic Effects of Chemical Substances)
SIDS	SIDS (Screening Information Dataset) for High Volume Chemicals
SYKE	The Finnish Environment Institute (SYKE)
USDA	USDA (United States Department of Agriculture)
USDC	USDC (United States Department of Commerce)
WHO	WHO (World Health Organization)

**Legend - Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION**

TWA	TWA (time-weighted average)	STEL	STEL (Short Term Exposure Limit)
MAC	Maximum Allowable Concentration	Ceiling	Ceiling Limit Value
X	Listed	Vacated	These values have no official status. The only binding levels of contaminants are those listed in the final OSHA PEL. These lists are for reference purposes only. Please note that some reference state regulations of these "liberated" exposure limits in their state regulations.
SKN*	Skin designation	SKN+	Skin sensitization
RSP+	Respiratory sensitization	**	Hazard Designation
C	Carcinogen	R	Reproductive toxicant
M	mutagen		

**Prepared By** Hach Product Compliance Department

**Issue Date** 07-Oct-2018

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**Revision Date** 26-Jan-2024

**Revision Note** None

**Disclaimer**

**USER RESPONSIBILITY:** Each user should read and understand this information and incorporate it in individual site safety programs in accordance with applicable hazard communication standards and regulations.

**THE INFORMATION CONTAINED HEREIN IS BASED ON DATA CONSIDERED TO BE ACCURATE. HOWEVER, NO WARRANTY IS EXPRESSED OR IMPLIED REGARDING THE ACCURACY OF THESE DATA OR THE RESULTS TO BE OBTAINED FROM THE USE THEREOF.**

**HACH COMPANY©2023**

**End of Safety Data Sheet**



**Be Right™**

# SAFETY DATA SHEET

Issue Date 28-05-2020

Revision Date 26-Jan-2024

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## 1. IDENTIFICATION

**Product identifier**

**Product Name** HgEx™ Reagent C

**Other means of identification**

**Product Code(s)** 2659059

**Safety data sheet number** M01433

**UN/ID no** UN1791

**Recommended use of the chemical and restrictions on use**

**Recommended Use** Laboratory reagent.

**Uses advised against** Consumer use.

**Restrictions on use** For Laboratory Use Only.

**Details of the supplier of the safety data sheet**

**Manufacturer Address**

Hach Company, P.O.Box 389, Loveland, CO 80539, USA, +1(970) 669-3050

**Emergency telephone number**

+1(303) 623-5716 - 24 Hour Service

## 2. HAZARDS IDENTIFICATION

**Classification**

**Regulatory Status**

This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Corrosive to metals	Category 1
Skin corrosion/irritation	Category 1
Serious eye damage/eye irritation	Category 1
Aquatic Acute Toxicity	Category 1
Chronic aquatic toxicity	Category 1

**Hazards not otherwise classified (HNOC)**

Not applicable

**Label elements**

**Signal word**

Danger



**Hazard statements**

H290 - May be corrosive to metals  
H314 - Causes severe skin burns and eye damage  
H410 - Very toxic to aquatic life with long lasting effects

**Precautionary statements**

P260 - Do not breathe dust/fume/gas/mist/vapors/spray  
P280 - Wear protective gloves, protective clothing, eye protection, and face protection  
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 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  
P310 - Immediately call a POISON CENTER or doctor/physician  
P363 - Wash contaminated clothing before reuse  
P405 - Store locked up  
P501 - Dispose of contents/ container to an approved waste disposal plant  
P273 - Avoid release to the environment  
P391 - Collect spillage  
P234 - Keep only in original container  
P390 - Absorb spillage to prevent material damage

**Other Hazards Known**

None

**3. COMPOSITION/INFORMATION ON INGREDIENTS**

**Substance**

Not applicable

**Mixture**

**Chemical Family** Mixture.  
**Chemical nature** Aqueous alkaline solution.

Percent ranges are used where confidential product information is applicable.

Chemical name	CAS No	Percent Range	HMRIC #
Sodium hypochlorite	7681-52-9	3 - 7%	-

**4. FIRST AID MEASURES**

**Description of first aid measures**

<b>General advice</b>	Show this safety data sheet to the doctor in attendance. Immediate medical attention is required.
<b>Inhalation</b>	Remove to fresh air. If breathing has stopped, give artificial respiration. Get medical attention immediately. Do not use mouth-to-mouth method if victim ingested or inhaled the substance; give artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. If breathing is difficult, (trained personnel should) give oxygen. Delayed pulmonary edema may occur. Get immediate medical advice/attention.
<b>Eye contact</b>	Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Keep eye wide open while rinsing. Do not rub affected area. Get immediate medical advice/attention.
<b>Skin contact</b>	Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. Get immediate medical advice/attention.
<b>Ingestion</b>	Clean mouth with water and drink afterwards plenty of water. Never give anything by mouth to an unconscious person. Do NOT induce vomiting. Get immediate medical advice/attention.
<b>Self-protection of the first aider</b>	Avoid contact with skin, eyes or clothing. Ensure that medical personnel are aware of the material(s) involved, take precautions to protect themselves and prevent spread of contamination. Avoid direct contact with skin. Use barrier to give mouth-to-mouth resuscitation.

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

**Symptoms** Burning sensation.

**Indication of any immediate medical attention and special treatment needed**

**Note to physicians** Product is a corrosive material. Use of gastric lavage or emesis is contraindicated. Possible perforation of stomach or esophagus should be investigated. Do not give chemical antidotes. Asphyxia from glottal edema may occur. Marked decrease in blood pressure may occur with moist rales, frothy sputum, and high pulse pressure.

**5. FIRE-FIGHTING MEASURES**

<b>Suitable Extinguishing Media</b>	Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
<b>Unsuitable Extinguishing Media</b>	Caution: Use of water spray when fighting fire may be inefficient.
<b>Specific hazards arising from the chemical</b>	The product causes burns of eyes, skin and mucous membranes. Thermal decomposition can lead to release of irritating gases and vapors.
<b>Hazardous combustion products</b>	This material will not burn.
<b>Special protective equipment for fire-fighters</b>	Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear. Use personal protection equipment.

**6. ACCIDENTAL RELEASE MEASURES**

**U.S. Notice** Only persons properly qualified to respond to an emergency involving hazardous substances may respond to a spill according to federal regulations (OSHA 29 CFR 1910.120(a)(v)) and per your company's emergency response plan and guidelines/procedures. See Section 13, Special Instructions for disposal assistance. Outside

of the US, only persons properly qualified according to state or local regulations should respond to a spill involving chemicals.

**Personal precautions, protective equipment and emergency procedures**

**Personal precautions** Avoid contact with skin, eyes or clothing. Ensure adequate ventilation. Use personal protective equipment as required. Attention! Corrosive material. Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak.

**Other Information** Refer to protective measures listed in Sections 7 and 8.

**Environmental precautions**

**Environmental precautions** Prevent further leakage or spillage if safe to do so. Should not be released into the environment. Do not allow to enter into soil/subsoil. Prevent product from entering drains.

**Methods and material for containment and cleaning up**

**Methods for containment** Prevent further leakage or spillage if safe to do so.

**Methods for cleaning up** Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust). Take up mechanically, placing in appropriate containers for disposal.

**Prevention of secondary hazards** Clean contaminated objects and areas thoroughly observing environmental regulations.

**Reference to other sections** See section 8 for more information. See section 13 for more information.

**7. HANDLING AND STORAGE**

**Precautions for safe handling**

**Advice on safe handling** Handle in accordance with good industrial hygiene and safety practice. Avoid contact with skin, eyes or clothing. In case of insufficient ventilation, wear suitable respiratory equipment. Handle product only in closed system or provide appropriate exhaust ventilation. Do not eat, drink or smoke when using this product. Take off contaminated clothing and wash before reuse.

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

**Storage Conditions** Keep containers tightly closed in a dry, cool and well-ventilated place. Protect from moisture. Store locked up. Keep out of the reach of children. Store away from other materials.

**Flammability class** Not applicable

**8. EXPOSURE CONTROLS/PERSONAL PROTECTION**

**Control parameters**

**Exposure Guidelines** This product, as supplied, does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies

**Appropriate engineering controls**

**Engineering Controls** Showers  
Eyewash stations  
Ventilation systems.

**Individual protection measures, such as personal protective equipment**



<b>Respiratory protection</b>	No protective equipment is needed under normal use conditions. If exposure limits are exceeded or irritation is experienced, ventilation and evacuation may be required.
<b>Hand Protection</b>	Wear suitable gloves. Impervious gloves.
<b>Eye/face protection</b>	Face protection shield.
<b>Skin and body protection</b>	Wear suitable protective clothing. Long sleeved clothing. Chemical resistant apron. Avoid contact with eyes, skin and clothing. Wash contaminated clothing before reuse.
<b>General Hygiene Considerations</b>	Wear suitable gloves and eye/face protection. Do not eat, drink or smoke when using this product. Regular cleaning of equipment, work area and clothing is recommended. Avoid contact with skin, eyes or clothing. Remove and wash contaminated clothing and gloves, including the inside, before re-use. Contaminated work clothing should not be allowed out of the workplace. Wash hands before breaks and immediately after handling the product.
<b>Environmental exposure controls</b>	Local authorities should be advised if significant spillages cannot be contained. Do not allow into any sewer, on the ground or into any body of water.
<b>Thermal hazards</b>	None under normal processing.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

### Information on basic physical and chemical properties

<b>Physical state</b>	Liquid	<b>Color</b>	Colorless to light yellow
<b>Appearance</b>	aqueous solution	<b>Odor threshold</b>	No data available
<b>Odor</b>	Chlorine		

<u>Property</u>	<u>Values</u>	<u>Remarks • Method</u>
<b>Molecular weight</b>	Not applicable	
<b>pH</b>	11.5	@ 20 °C
<b>Melting point / freezing point</b>	-6 °C / 21.2 °F	
<b>Initial boiling point and boiling range</b>	No data available	
<b>Evaporation rate</b>	0.85 (water = 1)	
<b>Vapor pressure</b>	17.477 mm Hg / 2.33 kPa at 20 °C / 68 °F	
<b>Relative vapor density</b>	0.65	
<b>Specific gravity - VALUE 1</b>	1.06	
<b>Partition coefficient</b>	No data available	
<b>Soil Organic Carbon-Water Partition Coefficient</b>	No data available	
<b>Autoignition temperature</b>	No data available	
<b>Decomposition temperature</b>	40 °C / 104 °F	
<b>Dynamic viscosity</b>	~ 1.1 cP (mPa s) at 20 °C / 68 °F	
<b>Kinematic viscosity</b>	~ 1.038 cSt (mm²/s) at 20 °C / 68 °F	

### Solubility(ies)

#### **Water solubility**

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<u>Water solubility classification</u>	<u>Water solubility</u>	<u>Water Solubility Temperature</u>
Completely soluble	> 10000 mg/L	25 °C / 77 °F

#### Solubility in other solvents

<u>Chemical Name</u>	<u>Solubility classification</u>	<u>Solubility</u>	<u>Solubility Temperature</u>
Acid	Soluble	> 1000 mg/L	25 °C / 77 °F

#### Other information

##### Metal Corrosivity

Classified as corrosive to metal according to GHS criteria

**Steel Corrosion Rate**

> 6.25 mm/yr / > 0.25 in/yr

**Aluminum Corrosion Rate**

No data available

##### Volatile Organic Compounds (VOC) Content

This Product is by Weight 100% an Individual Pure Chemical Substance

<u>Chemical name</u>	<u>CAS No</u>	<u>Volatile organic compounds (VOC) content</u>	<u>CAA (Clean Air Act)</u>
Sodium hypochlorite	7681-52-9	Not applicable	-

#### Explosive properties

**Upper explosion limit**

Not applicable

**Lower explosion limit**

Not applicable

#### Flammable properties

**Flash point**

No data available

#### Flammability Limit in Air

**Upper flammability limit:**

No data available

**Lower flammability limit:**

No data available

#### Oxidizing properties

No data available.

**Bulk density**

Not applicable

## 10. STABILITY AND REACTIVITY

#### Reactivity

Corrosive on contact with water. Corrosive to metal.

#### Chemical stability

Stable under normal conditions.

#### Explosion data

**Sensitivity to Mechanical Impact** None.

**Sensitivity to Static Discharge** None.

#### Possibility of hazardous reactions

None under normal processing.

#### Hazardous polymerization

Hazardous polymerization does not occur.

**Conditions to avoid**

Exposure to air or moisture over prolonged periods.

**Incompatible materials**

Oxidizing agent. Acids. Bases.

**Hazardous decomposition products**

Thermal decomposition can lead to release of irritating and toxic gases and vapors.

**11. TOXICOLOGICAL INFORMATION**

**Information on likely routes of exposure**

**Product Information**

**Inhalation**

Corrosive by inhalation. Inhalation of corrosive fumes/gases may cause coughing, choking, headache, dizziness, and weakness for several hours. Pulmonary edema may occur with tightness in the chest, shortness of breath, bluish skin, decreased blood pressure, and increased heart rate. Inhaled corrosive substances can lead to a toxic edema of the lungs. Pulmonary edema can be fatal.

**Eye contact**

Causes burns. Corrosive to the eyes and may cause severe damage including blindness. Causes serious eye damage. May cause irreversible damage to eyes.

**Skin contact**

Corrosive. Causes severe burns. Avoid contact with skin and clothing.

**Ingestion**

Causes burns. Ingestion causes burns of the upper digestive and respiratory tracts. May cause severe burning pain in the mouth and stomach with vomiting and diarrhea of dark blood. Blood pressure may decrease. Brownish or yellowish stains may be seen around the mouth. Swelling of the throat may cause shortness of breath and choking. May cause lung damage if swallowed. May be fatal if swallowed and enters airways.

**Symptoms**

Redness. Burning. May cause blindness. Coughing and/ or wheezing.

**Acute toxicity**

Based on available data, the classification criteria are not met

**Mixture**

No data available.

**Ingredient Acute Toxicity Data**

No data available.

**Unknown Acute Toxicity**

0% of the mixture consists of ingredient(s) of unknown toxicity.

**Acute Toxicity Estimations (ATE)**

Not applicable

<b>ATEmix (oral)</b>	No information available
<b>ATEmix (dermal)</b>	No information available
<b>ATEmix (inhalation-dust/mist)</b>	No information available
<b>ATEmix (inhalation-vapor)</b>	No information available
<b>ATEmix (inhalation-gas)</b>	No information available

**Skin corrosion/irritation**

Causes severe burns.

**Mixture**

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No data available.

**Ingredient Skin Corrosion/Irritation Data**

No data available.

**Serious eye damage/irritation**

Classification based on data available for ingredients. Causes burns. Risk of serious damage to eyes.

**Mixture**

No data available.

**Ingredient Eye Damage/Eye Irritation Data**

No data available.

**Respiratory or skin sensitization**

Based on available data, the classification criteria are not met.

**Mixture**

No data available.

**Ingredient Sensitization Data**

Test data reported below.

**Skin Sensitization Exposure Route**

Chemical name	Test method	Species	Results	Key literature references and sources for data
Sodium hypochlorite (3 - 7%) CAS#: 7681-52-9	OECD Test No. 406: Skin Sensitization	Guinea pig	Not confirmed to be a skin sensitizer	ECHA

**STOT - single exposure**

Based on available data, the classification criteria are not met.

**Mixture**

No data available.

**Ingredient Specific Target Organ Toxicity Single Exposure Data**

Test data reported below.

**Oral Exposure Route**

Chemical name	Endpoint type	Reported dose	Exposure time	Toxicological effects	Key literature references and sources for data
Sodium hypochlorite (3 - 7%) CAS#: 7681-52-9	Human TD <sub>Lo</sub>	1000 mg/kg	None reported	<b>Behavioral</b> Somnolence (general depressed activity) <b>Vascular</b> BP lowering not characterized in autonomic section <b>Skin and Appendages</b> Corrosive to skin after topical application	RTECS

**STOT - repeated exposure**

Based on available data, the classification criteria are not met.

**Mixture**

No data available.

**Ingredient Specific Target Organ Toxicity Repeat Exposure Data**

Test data reported below.

**Oral Exposure Route**

Chemical name	Endpoint type	Reported dose	Exposure time	Toxicological effects	Key literature references and sources for data
Sodium hypochlorite (3 - 7%) CAS#: 7681-52-9	Rat TD <sub>Lo</sub>	140 mg/kg	63 days	<b>Endocrine</b> Changes in spleen weight <b>Immunological Including Allergic</b> Decrease in cellular immune response <b>Biochemical</b> Intermediary metabolism (lipids including transport)	RTECS

**Carcinogenicity**

Based on available data, the classification criteria are not met.

**Mixture**

No data available.

**Ingredient Carcinogenicity Data**

No data available.

Chemical name	CAS No	ACGIH	IARC	NTP	OSHA
Sodium hypochlorite	7681-52-9	-	Group 3	-	-

**Legend**

<b>ACGIH (American Conference of Governmental Industrial Hygienists)</b>	Does not apply
<b>IARC (International Agency for Research on Cancer)</b>	Group 3 - Not classifiable as a human carcinogen
<b>NTP (National Toxicology Program)</b>	Does not apply
<b>OSHA</b>	Does not apply

**Germ cell mutagenicity**

Based on available data, the classification criteria are not met.

**Mixture invitro Data**

No data available.

**Substance invitro Data**

Test data reported below.

Chemical name	Test	Cell Strain	Reported dose	Exposure time	Results	Key literature references and sources for data
Sodium hypochlorite (3 - 7%) CAS#: 7681-52-9	Cytogenetic analysis	Human lymphocyte	100 mg/L	24 hours	Positive test result for mutagenicity	RTECS

**Mixture invivo Data**

No data available.

**Substance invivo Data**

No data available.

**Reproductive toxicity**

Based on available data, the classification criteria are not met.

**Mixture**

No data available.

#### Ingredient Reproductive Toxicity Data

Test data reported below.

#### Oral Exposure Route

Chemical name	Endpoint type	Reported dose	Exposure time	Toxicological effects	Key literature references and sources for data
Sodium hypochlorite (3 - 7%) CAS#: 7681-52-9	Rat NOAEL	>= 5 mg/kg	Single generation	No reproductive or developmental toxic effects observed	ECHA

#### Aspiration hazard

Based on available data, the classification criteria are not met.

## 12. ECOLOGICAL INFORMATION

#### Ecotoxicity

Very toxic to aquatic life with long lasting effects.

#### Unknown aquatic toxicity

0% of the mixture consists of components(s) of unknown hazards to the aquatic environment.

#### Mixture

#### Aquatic Acute Toxicity

No data available.

#### Aquatic Chronic Toxicity

No data available.

#### Substance

#### Aquatic Acute Toxicity

Test data reported below.

#### Fish

Chemical name	Exposure time	Species	Endpoint type	Reported dose	Key literature references and sources for data
Sodium hypochlorite (3 - 7%) CAS#: 7681-52-9	96 hours	<i>Clupea pallasii</i>	LC <sub>50</sub>	0.065 mg/L	Vendor SDS

#### Crustacea

Chemical name	Exposure time	Species	Endpoint type	Reported dose	Key literature references and sources for data
Sodium hypochlorite (3 - 7%) CAS#: 7681-52-9	48 Hours	<i>Daphnia magna</i>	LC <sub>50</sub>	0.032 mg/L	Vendor SDS

#### Algae

Chemical name	Exposure time	Species	Endpoint type	Reported dose	Key literature references and sources for data
Sodium hypochlorite (3 - 7%) CAS#: 7681-52-9	72 Hours	<i>Pseudokirchnerella subcapitata</i>	EC <sub>50</sub>	0.05 mg/L	ECHA

#### Aquatic Chronic Toxicity

Test data reported below.

**Fish**

Chemical name	Exposure time	Species	Endpoint type	Reported dose	Key literature references and sources for data
Sodium hypochlorite (3 - 7%) CAS#: 7681-52-9	28 days	<i>Menidia peninsulae</i>	NOEC	0.04 mg/L	ECHA

**Crustacea**

Chemical name	Exposure time	Species	Endpoint type	Reported dose	Key literature references and sources for data
Sodium hypochlorite (3 - 7%) CAS#: 7681-52-9	15 days	<i>Crassostrea virginica</i>	NOEC	0.007 mg/L	ECHA

**Algae**

Chemical name	Exposure time	Species	Endpoint type	Reported dose	Key literature references and sources for data
Sodium hypochlorite (3 - 7%) CAS#: 7681-52-9	7 days	None reported	NOEC	0.0021 mg/L	ECHA

**Persistence and degradability**

**Mixture**

No data available.

Bioaccumulation

MATERIAL DOES NOT BIOACCUMULATE

**Mixture**

No data available.

**Partition coefficient**

No data available

**Mobility**

**Soil Organic Carbon-Water Partition Coefficient**

No data available

**Other adverse effects**

No information available

**13. DISPOSAL CONSIDERATIONS**

**Waste treatment methods**

**Waste from residues/unused products**

Dispose of in accordance with local regulations. Dispose of waste in accordance with environmental legislation.

**Contaminated packaging**

Do not reuse empty containers.

**US EPA Waste Number**

D002

**Special instructions for disposal**

Work in an approved fume hood. Be extremely careful not to contact the material or breathe any vapors. Dilute material with excess water making a weaker than 5% solution. Do not

allow material to go to drain. Check with local municipal and state authorities and waste contractors for pertinent local information regarding the proper disposal of chemicals.

## 14. TRANSPORT INFORMATION

### DOT

UN/ID no	UN1791
Proper shipping name	HYPOCHLORITE SOLUTIONS
Transport hazard class(es)	8
Packing Group	II
Emergency Response Guide Number	154

### TDG

UN/ID no	UN1791
Proper shipping name	HYPOCHLORITE SOLUTION
Transport hazard class(es)	8
Packing Group	II

### IATA

UN number or ID number	UN1791
Proper shipping name	Hypochlorite solution
Transport hazard class(es)	8
Packing group	II
ERG Code	8L
Special Provisions	A3, A803
Description	UN1791, Hypochlorite solution, 8, II

### IMDG

UN number or ID number	UN1791
Proper shipping name	HYPOCHLORITE SOLUTION
IMDG Technical Name	Sodium hypochlorite
Transport hazard class(es)	8
Packing Group	II
EmS-No	F-A, S-B
Special Provisions	274, 900
Description	UN1791, HYPOCHLORITE SOLUTION (Sodium hypochlorite), 8, II, Marine pollutant

**Note:** No special precautions necessary.

### **Additional information**

There is a possibility that this product could be contained in a reagent set or kit composed of various compatible dangerous goods. If the item is not in a reagent set or kit, the classification given above applies.

If the item is part of a reagent set or kit the classification would change to the following:

UN3316 Chemical Kit, Hazard Class 9, Packing Group II or III.

If the item is not regulated, the Chemical Kit classification does not apply.

## 15. REGULATORY INFORMATION

### National Inventories

TSCA	Complies
DSL/NDSL	Complies

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory

DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List

### International Inventories

EINECS/ELINCS	Complies
ENCS	Complies
IECSC	Complies
KECL	Complies
PICCS	Complies



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TCSI Complies  
 AICS Complies  
 NZIoC Complies

**EINECS/ELINCS** - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances  
**ENCS** - Japan Existing and New Chemical Substances  
**IECSC** - China Inventory of Existing Chemical Substances  
**KECL** - Korean Existing and Evaluated Chemical Substances  
**PICCS** - Philippines Inventory of Chemicals and Chemical Substances  
**TCSI** - Taiwan Chemical Substances Inventory  
**AICS** - Australian Inventory of Chemical Substances  
**NZIoC** - New Zealand Inventory of Chemicals

**US Federal Regulations**

**SARA 313**

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

**SARA 311/312 Hazard Categories**

Acute health hazard Yes  
 Chronic Health Hazard Yes  
 Fire hazard No  
 Sudden release of pressure hazard No  
 Reactive Hazard No

**CWA (Clean Water Act)**

This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42)

Chemical name	CWA - Reportable Quantities	CWA - Toxic Pollutants	CWA - Priority Pollutants	CWA - Hazardous Substances
Sodium hypochlorite 7681-52-9	100 lb	-	-	X

**CERCLA**

This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material

Chemical name	Hazardous Substances RQs	CERCLA/SARA RQ	Reportable Quantity (RQ)
Sodium hypochlorite 7681-52-9	100 lb	-	RQ 100 lb final RQ RQ 45.4 kg final RQ

**US State Regulations**

**California Proposition 65**

This product does not contain any Proposition 65 chemicals

IMERC: Not applicable

**U.S. State Right-to-Know Regulations**

This product may contain substances regulated by state right-to-know regulations.

Chemical name	New Jersey	Massachusetts	Pennsylvania
Sodium hypochlorite 7681-52-9	X	X	X

**U.S. EPA Label Information**

Chemical name	FIFRA	FDA
Sodium hypochlorite	180.0940	-

## 16. OTHER INFORMATION, INCLUDING DATE OF PREPARATION OF THE LAST REVISION

### Special Comments

None

### Additional information

#### Global Automotive Declarable Substance List (GADSL)

Not applicable

#### NFPA and HMIS Classifications

NFPA	Health hazards - 3	Flammability - 0	Instability - 0	Physical and chemical properties -
HMIS	Health hazards - 3	Flammability - 0	Physical hazards - 0	Personal protection - X -1

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

ACGIH	ACGIH (American Conference of Governmental Industrial Hygienists)
ATSDR	ATSDR (Agency for Toxic Substances and Disease Registry)
CCRIS	CCRIS (Chemical Carcinogenesis Research Information System)
CDC	CDC (Center for Disease Control)
CEPA	CEPA (Canadian Environmental Protection Agency)
CICAD	CICAD (Concise International Chemical Assessment Documents)
ECHA	ECHA (The European Chemicals Agency)
EEA	EEA (European Environment Agency)
EPA	EPA (Environmental Protection Agency)
ERMA	ERMA (New Zealand's Environmental Risk Management Authority)
ECOSARS	Estimation through ECOSARS v1.11 part of the Estimation Programs Interface (EPI) Suite™
FDA	FDA (Food & Drug Administration)
GESTIS	GESTIS (Information System on Hazardous Substances of the German Social Accident Insurance)
HSDB	HSDB (Hazardous Substances Data Bank)
INERIS	INERIS (The National Industrial Environment and Risks Institute)
IPCS INCHEM	IPCS INCHEM (International Programme on Chemical Safety)
IUCLID	IUCLID (The International Uniform Chemical Information Database)
NITE	Japan National Institute of Technology and Evaluation (NITE)
NIH	NIH (National Institutes of Health)
NIOSH	NIOSH (National Institute for Occupational Safety and Health)
LOLI	LOLI (List of Lists - An International Chemical Regulatory Database)
NDF	no data
NICNAS	Australia National Industrial Chemicals Notification and Assessment Scheme (NICNAS)
NIOSH IDLH	Immediately Dangerous to Life or Health
OSHA	OSHA (Occupational Safety and Health Administration of the US Department of Labor)
PEEN	PEEN (Pan European Ecological Network)
RTECS	RTECS (Registry of Toxic Effects of Chemical Substances)
SIDS	SIDS (Screening Information Dataset) for High Volume Chemicals
SYKE	The Finnish Environment Institute (SYKE)
USDA	USDA (United States Department of Agriculture)
USDC	USDC (United States Department of Commerce)
WHO	WHO (World Health Organization)

### Legend - Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

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TWA	TWA (time-weighted average)	STEL	STEL (Short Term Exposure Limit)
MAC	Maximum Allowable Concentration	Ceiling	Ceiling Limit Value
X	Listed	Vacated	These values have no official status. The only binding levels of contaminants are those listed in the final OSHA PEL. These lists are for reference purposes only. Please note that some reference state regulations of these "liberated" exposure limits in their state regulations.
SKN*	Skin designation	SKN+	Skin sensitization
RSP+	Respiratory sensitization	**	Hazard Designation
C	Carcinogen	R	Reproductive toxicant
M	mutagen		

**Prepared By** Hach Product Compliance Department

**Issue Date** 28-05-2020

**Revision Date** 26-Jan-2024

**Revision Note** None

**Disclaimer**

**USER RESPONSIBILITY:** Each user should read and understand this information and incorporate it in individual site safety programs in accordance with applicable hazard communication standards and regulations.

**THE INFORMATION CONTAINED HEREIN IS BASED ON DATA CONSIDERED TO BE ACCURATE. HOWEVER, NO WARRANTY IS EXPRESSED OR IMPLIED REGARDING THE ACCURACY OF THESE DATA OR THE RESULTS TO BE OBTAINED FROM THE USE THEREOF.**

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**End of Safety Data Sheet**



Be Right™

# SAFETY DATA SHEET

Issue Date 26-11-2018

Revision Date 26-Jan-2024

Version 3

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## 1. IDENTIFICATION

### Product identifier

**Product Name** HgEx™ 4 Indicator

### Other means of identification

**Product Code(s)** 2658548

**Safety data sheet number** M01088

### Recommended use of the chemical and restrictions on use

**Recommended Use** Water Analysis. Determination of lead.

**Uses advised against** Consumer use.

**Restrictions on use** For Laboratory Use Only.

### Details of the supplier of the safety data sheet

#### **Manufacturer Address**

Hach Company, P.O.Box 389, Loveland, CO 80539, USA, +1(970) 669-3050

#### **Emergency telephone number**

+1(303) 623-5716 - 24 Hour Service

## 2. HAZARDS IDENTIFICATION

### Classification

#### **Regulatory Status**

This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Specific target organ toxicity (repeated exposure)
--

Category 1
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### Hazards not otherwise classified (HNOC)

Not applicable

### Label elements

#### **Signal word**

Danger



### **Hazard statements**

H372 - Causes damage to organs through prolonged or repeated exposure

**Precautionary statements**

P260 - Do not breathe dust/fume/gas/mist/vapors/spray  
P264 - Wash face, hands and any exposed skin thoroughly after handling  
P270 - Do not eat, drink or smoke when using this product  
P314 - Get medical advice/attention if you feel unwell  
P501 - Dispose of contents/ container to an approved waste disposal plant

**Other Hazards Known**

May be harmful if swallowed

**3. COMPOSITION/INFORMATION ON INGREDIENTS**

**Substance**

Not applicable

**Mixture**

Chemical Family Mixture.  
Chemical nature Mixture of inorganic salts.

Percent ranges are used where confidential product information is applicable.

Chemical name	CAS No	Percent Range	HMRIC #
Potassium iodide (KI)	7681-11-0	<10%	-

**4. FIRST AID MEASURES**

**Description of first aid measures**

**General advice** Show this safety data sheet to the doctor in attendance.  
**Inhalation** Remove to fresh air.  
**Eye contact** Rinse thoroughly with plenty of water for at least 15 minutes, lifting lower and upper eyelids. Consult a physician.  
**Skin contact** Wash skin with soap and water.  
**Ingestion** Clean mouth with water and drink afterwards plenty of water.

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

**Symptoms** See Section 11 for additional Toxicological Information.

**Indication of any immediate medical attention and special treatment needed**

**Note to physicians** Treat symptomatically.

**5. FIRE-FIGHTING MEASURES**

**Suitable Extinguishing Media** Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.  
**Unsuitable Extinguishing Media** Caution: Use of water spray when fighting fire may be inefficient.  
**Specific hazards arising from the chemical** No information available.

**Hazardous combustion products** This material will not burn.

**Special protective equipment for fire-fighters** Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear. Use personal protection equipment.

## 6. ACCIDENTAL RELEASE MEASURES

**U.S. Notice** Only persons properly qualified to respond to an emergency involving hazardous substances may respond to a spill according to federal regulations (OSHA 29 CFR 1910.120(a)(v)) and per your company's emergency response plan and guidelines/procedures. See Section 13, Special Instructions for disposal assistance. Outside of the US, only persons properly qualified according to state or local regulations should respond to a spill involving chemicals.

### Personal precautions, protective equipment and emergency procedures

**Personal precautions** Ensure adequate ventilation. Use personal protective equipment as required. Evacuate personnel to safe areas.

**Other Information** Refer to protective measures listed in Sections 7 and 8.

### Environmental precautions

**Environmental precautions** See Section 12 for additional ecological information.

### Methods and material for containment and cleaning up

**Methods for containment** Prevent further leakage or spillage if safe to do so.

**Methods for cleaning up** Take up mechanically, placing in appropriate containers for disposal.

**Prevention of secondary hazards** Clean contaminated objects and areas thoroughly observing environmental regulations.

**Reference to other sections** See section 8 for more information. See section 13 for more information.

## 7. HANDLING AND STORAGE

### Precautions for safe handling

**Advice on safe handling** Handle in accordance with good industrial hygiene and safety practice. Ensure adequate ventilation.

### Conditions for safe storage, including any incompatibilities

**Storage Conditions** Keep containers tightly closed in a dry, cool and well-ventilated place.

**Flammability class** Not applicable

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

### Control parameters

#### Exposure Guidelines

Chemical name	ACGIH TLV	OSHA PEL	NIOSH
Potassium iodide (KI)	TWA: 0.01 mg/m <sup>3</sup> I inhalable	NDF	NDF

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CAS#: 7681-11-0	particulate matter S*		
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**Appropriate engineering controls**

**Engineering Controls** Showers  
 Eyewash stations  
 Ventilation systems.

**Individual protection measures, such as personal protective equipment**

**Respiratory protection** No protective equipment is needed under normal use conditions. If exposure limits are exceeded or irritation is experienced, ventilation and evacuation may be required.

**Hand Protection** Wear suitable gloves.

**Eye/face protection** Wear safety glasses with side shields (or goggles).

**Skin and body protection** No special protective equipment required.

**General Hygiene Considerations** Handle in accordance with good industrial hygiene and safety practice.

**Environmental exposure controls** Local authorities should be advised if significant spillages cannot be contained. Do not allow into any sewer, on the ground or into any body of water.

**Thermal hazards** None under normal processing.

**9. PHYSICAL AND CHEMICAL PROPERTIES**

**Information on basic physical and chemical properties**

<b>Physical state</b>	Solid	<b>Color</b>	Tan
<b>Appearance</b>	powder	<b>Odor threshold</b>	Not applicable
<b>Odor</b>	Odorless		

<u>Property</u>	<u>Values</u>	<u>Remarks • Method</u>
<b>Molecular weight</b>	Not applicable	
<b>pH</b>	No data available	
<b>Melting point / freezing point</b>	No data available	
<b>Initial boiling point and boiling range</b>	No data available	
<b>Evaporation rate</b>	Not applicable	
<b>Vapor pressure</b>	Not applicable	
<b>Relative vapor density</b>	No data available	
<b>Specific gravity - VALUE 1</b>	1.17	
<b>Partition coefficient</b>	No data available	
<b>Soil Organic Carbon-Water Partition Coefficient</b>	No data available	
<b>Autoignition temperature</b>	No data available	
<b>Decomposition temperature</b>	No data available	
<b>Dynamic viscosity</b>	Not applicable	
<b>Kinematic viscosity</b>	Not applicable	

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### Solubility(ies)

#### Water solubility

<u>Water solubility classification</u>	<u>Water solubility</u>	<u>Water Solubility Temperature</u>
Soluble	> 1000 mg/L	25 °C / 77 °F

#### Solubility in other solvents

<u>Chemical Name</u>	<u>Solubility classification</u>	<u>Solubility</u>	<u>Solubility Temperature</u>
Acid	Insoluble	< 0.1 mg/L	25 °C / 77 °F
Glycerol	Soluble	> 1000 mg/L	25 °C / 77 °F

### Other information

#### Metal Corrosivity

Steel Corrosion Rate Not applicable  
Aluminum Corrosion Rate Not applicable

#### Volatile Organic Compounds (VOC) Content

Not applicable

<u>Chemical name</u>	<u>CAS No</u>	<u>Volatile organic compounds (VOC) content</u>	<u>CAA (Clean Air Act)</u>
Potassium iodide (KI)	7681-11-0	Not applicable	-

#### Explosive properties

Upper explosion limit Not applicable  
Lower explosion limit Not applicable

#### Flammable properties

Flash point Not applicable

#### Flammability Limit in Air

Upper flammability limit: No data available  
Lower flammability limit: No data available

#### Oxidizing properties

No data available.

#### Bulk density

No data available

## 10. STABILITY AND REACTIVITY

### Reactivity

Not applicable.

### Chemical stability

Stable under normal conditions.

### Explosion data

Sensitivity to Mechanical Impact None.  
Sensitivity to Static Discharge None.



**Possibility of hazardous reactions**

None under normal processing.

**Hazardous polymerization**

Hazardous polymerization does not occur.

**Conditions to avoid**

None known based on information supplied.

**Incompatible materials**

Strong oxidizing agents, strong acids, and strong bases.

**Hazardous decomposition products**

Potassium oxide. Iodine. Iodine compounds. Sodium monoxide. Chlorides.

**11. TOXICOLOGICAL INFORMATION**

**Information on likely routes of exposure**

**Product Information**

**Inhalation** No known effect based on information supplied.

**Eye contact** No known effect based on information supplied.

**Skin contact** No known effect based on information supplied.

**Ingestion** No known effect based on information supplied.

**Symptoms** No information available.

**Acute toxicity**

Based on available data, the classification criteria are not met

**Mixture**

No data available.

**Ingredient Acute Toxicity Data**

Test data reported below.

**Oral Exposure Route**

Chemical name	Endpoint type	Reported dose	Exposure time	Toxicological effects	Key literature references and sources for data
Potassium iodide (KI) (<10%) CAS#: 7681-11-0	Rat LD <sub>50</sub>	2779 mg/kg	None reported	None reported	RTECS

**Unknown Acute Toxicity**

0% of the mixture consists of ingredient(s) of unknown toxicity.

**Acute Toxicity Estimations (ATE)**

The following values are calculated based on chapter 3.1 of the GHS document

ATEmix (oral)	3,249.50 mg/kg
ATEmix (dermal)	No information available
ATEmix (inhalation-dust/mist)	No information available
ATEmix (inhalation-vapor)	No information available

<b>ATEmix (inhalation-gas)</b>	No information available
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**Skin corrosion/irritation**

Based on available data, the classification criteria are not met.

**Mixture**

No data available.

**Ingredient Skin Corrosion/Irritation Data**

No data available.

**Serious eye damage/irritation**

Based on available data, the classification criteria are not met.

**Mixture**

No data available.

**Ingredient Eye Damage/Eye Irritation Data**

No data available.

**Respiratory or skin sensitization**

Based on available data, the classification criteria are not met.

**Mixture**

No data available.

**Ingredient Sensitization Data**

Test data reported below.

**Skin Sensitization Exposure Route**

Chemical name	Test method	Species	Results	Key literature references and sources for data
Potassium iodide (KI) (<10%) CAS#: 7681-11-0	Patch test	Human	Not confirmed to be a skin sensitizer	ERMA

**STOT - single exposure**

Based on available data, the classification criteria are not met.

**Mixture**

No data available.

**Ingredient Specific Target Organ Toxicity Single Exposure Data**

Test data reported below.

**Oral Exposure Route**

Chemical name	Endpoint type	Reported dose	Exposure time	Toxicological effects	Key literature references and sources for data
Potassium iodide (KI) (<10%) CAS#: 7681-11-0	Mouse LD <sub>Lo</sub>	1862 mg/kg	None reported	Lungs, Thorax, or Respiration Dyspnea	RTECS

**STOT - repeated exposure**

Causes damage to organs through prolonged or repeated exposure.

**Mixture**

No data available.

**Ingredient Specific Target Organ Toxicity Repeat Exposure Data**

Test data reported below.

### Oral Exposure Route

Chemical name	Endpoint type	Reported dose	Exposure time	Toxicological effects	Key literature references and sources for data
Potassium iodide (KI) (<10%) CAS#: 7681-11-0	Rat NOAEL	0.5 mg/kg	90 days	None reported	ECHA

### Carcinogenicity

Based on available data, the classification criteria are not met.

### Mixture

No data available.

### Ingredient Carcinogenicity Data

No data available.

Chemical name	CAS No	ACGIH	IARC	NTP	OSHA
Potassium iodide (KI)	7681-11-0	-	-	-	-

### Legend

<b>ACGIH (American Conference of Governmental Industrial Hygienists)</b>	Does not apply
<b>IARC (International Agency for Research on Cancer)</b>	Does not apply
<b>NTP (National Toxicology Program)</b>	Does not apply
<b>OSHA</b>	Does not apply

### Germ cell mutagenicity

Based on available data, the classification criteria are not met.

### Mixture invitro Data

No data available.

### Substance invitro Data

Test data reported below.

Chemical name	Test	Cell Strain	Reported dose	Exposure time	Results	Key literature references and sources for data
Potassium iodide (KI) (<10%) CAS#: 7681-11-0	Cytogenetic analysis	Rat ascites tumor	500 mg/kg	None reported	Positive test result for mutagenicity	RTECS

### Mixture invivo Data

No data available.

### Substance invivo Data

No data available.

### Reproductive toxicity

Based on available data, the classification criteria are not met.

### Mixture

No data available.

### Ingredient Reproductive Toxicity Data

Test data reported below.

### Oral Exposure Route

Chemical name	Endpoint type	Reported dose	Exposure time	Toxicological effects	Key literature references and sources for data
Potassium iodide (KI) (<10%) CAS#: 7681-11-0	Human TD <sub>Lo</sub>	2700 mg/kg	39 weeks	Specific Developmental Abnormalities Endocrine System	RTECS

#### Aspiration hazard

Based on available data, the classification criteria are not met.

## 12. ECOLOGICAL INFORMATION

#### Ecotoxicity

Based on available data, the classification criteria are not met.

#### Unknown aquatic toxicity

0% of the mixture consists of components(s) of unknown hazards to the aquatic environment.

#### Mixture

##### Aquatic Acute Toxicity

No data available.

##### Aquatic Chronic Toxicity

No data available.

#### Substance

##### Aquatic Acute Toxicity

No data available.

##### Aquatic Chronic Toxicity

No data available.

#### Persistence and degradability

##### Mixture

No data available.

##### Bioaccumulation

MATERIAL DOES NOT BIOACCUMULATE

##### Mixture

No data available.

#### Partition coefficient

No data available

#### Mobility

#### Soil Organic Carbon-Water Partition Coefficient

No data available

#### Other adverse effects

No information available

## 13. DISPOSAL CONSIDERATIONS

#### Waste treatment methods

#### Waste from residues/unused products

Dispose of in accordance with local regulations. Dispose of waste in accordance with environmental legislation.

#### Contaminated packaging

Do not reuse empty containers.

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**US EPA Waste Number** Not applicable

**Special instructions for disposal** Dilute material with excess water making a weaker than 5% solution. Open cold water tap completely, slowly pour the material to the drain. Allow cold water to run for 5 minutes to completely flush the system.

## 14. TRANSPORT INFORMATION

**DOT** Not regulated  
**TDG** Not regulated  
**IATA** Not regulated  
**IMDG** Not regulated  
**Note:** No special precautions necessary.

### Additional information

There is a possibility that this product could be contained in a reagent set or kit composed of various compatible dangerous goods. If the item is not in a reagent set or kit, the classification given above applies.  
If the item is part of a reagent set or kit the classification would change to the following:  
UN3316 Chemical Kit, Hazard Class 9, Packing Group II or III.  
If the item is not regulated, the Chemical Kit classification does not apply.

## 15. REGULATORY INFORMATION

### National Inventories

**TSCA** Complies  
**DSL/NDSL** Does not comply

**TSCA** - United States Toxic Substances Control Act Section 8(b) Inventory  
**DSL/NDSL** - Canadian Domestic Substances List/Non-Domestic Substances List

### International Inventories

**EINECS/ELINCS** Complies  
**ENCS** Does not comply  
**IECSC** Does not comply  
**KECL** Complies  
**PICCS** Does not comply  
**TCSI** Does not comply  
**AICS** Does not comply  
**NZIoC** Does not comply

**EINECS/ELINCS** - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances  
**ENCS** - Japan Existing and New Chemical Substances  
**IECSC** - China Inventory of Existing Chemical Substances  
**KECL** - Korean Existing and Evaluated Chemical Substances  
**PICCS** - Philippines Inventory of Chemicals and Chemical Substances  
**TCSI** - Taiwan Chemical Substances Inventory  
**AICS** - Australian Inventory of Chemical Substances  
**NZIoC** - New Zealand Inventory of Chemicals

### US Federal Regulations

#### SARA 313

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

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**SARA 311/312 Hazard Categories**

Acute health hazard	Yes
Chronic Health Hazard	Yes
Fire hazard	No
Sudden release of pressure hazard	No
Reactive Hazard	No

**CWA (Clean Water Act)**

This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42)

**CERCLA**

This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material

**US State Regulations**

**California Proposition 65**

This product does not contain any Proposition 65 chemicals

IMERC: Not applicable

**U.S. State Right-to-Know Regulations**

This product does not contain any substances regulated by state right-to-know regulations.

**U.S. EPA Label Information**

Chemical name	FIFRA	FDA
Potassium iodide (KI)	180.0940	21 CFR 184.1634

**16. OTHER INFORMATION, INCLUDING DATE OF PREPARATION OF THE LAST REVISION**

**Special Comments**

None

**Additional information**

**Global Automotive Declarable Substance List (GADSL)**

Not applicable

**NFPA and HMIS Classifications**

NFPA	Health hazards - 0	Flammability - 0	Instability - 0	Physical and chemical properties -
HMIS	Health hazards - 1*	Flammability - 0	Physical hazards - 0	Personal protection - X - I

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

ACGIH	ACGIH (American Conference of Governmental Industrial Hygienists)
ATSDR	ATSDR (Agency for Toxic Substances and Disease Registry)
CCRIS	CCRIS (Chemical Carcinogenesis Research Information System)
CDC	CDC (Center for Disease Control)

CEPA	CEPA (Canadian Environmental Protection Agency)
CICAD	CICAD (Concise International Chemical Assessment Documents)
ECHA	ECHA (The European Chemicals Agency)
EEA	EEA (European Environment Agency)
EPA	EPA (Environmental Protection Agency)
ERMA	ERMA (New Zealand's Environmental Risk Management Authority)
ECOSARS	Estimation through ECOSARS v1.11 part of the Estimation Programs Interface (EPI) Suite™
FDA	FDA (Food & Drug Administration)
GESTIS	GESTIS (Information System on Hazardous Substances of the German Social Accident Insurance)
HSDB	HSDB (Hazardous Substances Data Bank)
INERIS	INERIS (The National Industrial Environment and Risks Institute)
IPCS INCHEM	IPCS INCHEM (International Programme on Chemical Safety)
IUCLID	IUCLID (The International Uniform Chemical Information Database)
NITE	Japan National Institute of Technology and Evaluation (NITE)
NIH	NIH (National Institutes of Health)
NIOSH	NIOSH (National Institute for Occupational Safety and Health)
LOLI	LOLI (List of Lists - An International Chemical Regulatory Database)
NDF	no data
NICNAS	Australia National Industrial Chemicals Notification and Assessment Scheme (NICNAS)
NIOSH IDLH	Immediately Dangerous to Life or Health
OSHA	OSHA (Occupational Safety and Health Administration of the US Department of Labor)
PEEN	PEEN (Pan European Ecological Network)
RTECS	RTECS (Registry of Toxic Effects of Chemical Substances)
SIDS	SIDS (Screening Information Dataset) for High Volume Chemicals
SYKE	The Finnish Environment Institute (SYKE)
USDA	USDA (United States Department of Agriculture)
USDC	USDC (United States Department of Commerce)
WHO	WHO (World Health Organization)

**Legend - Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION**

TWA	TWA (time-weighted average)	STEL	STEL (Short Term Exposure Limit)
MAC	Maximum Allowable Concentration	Ceiling	Ceiling Limit Value
X	Listed	Vacated	These values have no official status. The only binding levels of contaminants are those listed in the final OSHA PEL. These lists are for reference purposes only. Please note that some reference state regulations of these "liberated" exposure limits in their state regulations.
SKN*	Skin designation	SKN+	Skin sensitization
RSP+	Respiratory sensitization	**	Hazard Designation
C	Carcinogen	R	Reproductive toxicant
M	mutagen		

**Prepared By** Hach Product Compliance Department  
**Issue Date** 26-11-2018  
**Revision Date** 26-Jan-2024  
**Revision Note** None

**Disclaimer**

**USER RESPONSIBILITY: Each user should read and understand this information and incorporate it in individual site safety programs in accordance with applicable hazard communication standards and regulations.**

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**End of Safety Data Sheet**





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# SAFETY DATA SHEET

Issue Date 15-Jan-2019

Revision Date 26-Jan-2024

Version 3.5

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## 1. IDENTIFICATION

### Product identifier

**Product Name** HgEx™ Reagent 3 Alkaline Reagent

### Other means of identification

**Product Code(s)** 2658448

**Safety data sheet number** M01087

**UN/ID no** UN1500

### Recommended use of the chemical and restrictions on use

**Recommended Use** Determination of mercury.

**Uses advised against**

**Restrictions on use** None.

### Details of the supplier of the safety data sheet

#### **Manufacturer Address**

Hach Company, P.O.Box 389, Loveland, CO 80539, USA, +1(970) 669-3050

#### **Emergency telephone number**

+1(303) 623-5716 - 24 Hour Service

## 2. HAZARDS IDENTIFICATION

### Classification

#### **Regulatory Status**

This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Oxidizing solids	Category 3
Acute toxicity - Oral	Category 3
Acute toxicity - Inhalation (Dusts/Mists)	Category 4
Serious eye damage/eye irritation	Category 2A
Aquatic Acute Toxicity	Category 1
Chronic aquatic toxicity	Category 1

#### **Hazards not otherwise classified (HNOC)**

Not applicable

#### **Label elements**

#### **Signal word**

Danger



**Hazard statements**

H272 - May intensify fire; oxidizer  
H301 - Toxic if swallowed  
H319 - Causes serious eye irritation  
H332 - Harmful if inhaled  
H410 - Very toxic to aquatic life with long lasting effects

**Precautionary statements**

P270 - Do not eat, drink or smoke when using this product  
P301 + P310 - IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician  
P405 - Store locked up  
P501 - Dispose of contents/ container to an approved waste disposal plant  
P261 - Avoid breathing dust/fume/gas/mist/vapors/spray  
P271 - Use only outdoors or in a well-ventilated area  
P304 + P340 - IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing  
P312 - Call a POISON CENTER or doctor/physician if you feel unwell  
P280 - Wear protective gloves, protective clothing, eye protection, and face protection  
P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing  
P337 + P313 - If eye irritation persists: Get medical attention  
P273 - Avoid release to the environment  
P391 - Collect spillage  
P210 - Keep away from heat/sparks/open flames/hot surfaces. - No smoking  
P220 - Keep/Store away from clothing/ combustible materials  
P221 - Take any precaution to avoid mixing with combustibles  
P370 + P378 - In case of fire: Use dry sand, dry chemical or alcohol-resistant foam to extinguish

**Other Hazards Known**

May be harmful in contact with skin  
Causes mild skin irritation

**3. COMPOSITION/INFORMATION ON INGREDIENTS**

**Substance**

Not applicable

**Mixture**

Percent ranges are used where confidential product information is applicable.

Chemical name	CAS No	Percent Range	HMRIC #
Disodium carbonate	497-19-8	50 - 60%	-
Sodium nitrite	7632-00-0	50 - 60%	-

## 4. FIRST AID MEASURES

### Description of first aid measures

<b>General advice</b>	Show this safety data sheet to the doctor in attendance.
<b>Inhalation</b>	If breathing has stopped, give artificial respiration. Get medical attention immediately. Remove to fresh air. If symptoms persist, call a physician.
<b>Eye contact</b>	Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Keep eye wide open while rinsing. Do not rub affected area. Get medical attention if irritation develops and persists.
<b>Skin contact</b>	IF ON CLOTHING: rinse immediately contaminated clothing and skin with plenty of water before removing clothes. IF ON SKIN: Wash with plenty of soap and water. Wash contaminated clothing before reuse.
<b>Ingestion</b>	Do NOT induce vomiting. Clean mouth with water and drink afterwards plenty of water. Never give anything by mouth to an unconscious person. Get medical attention.
<b>Self-protection of the first aider</b>	Avoid contact with skin, eyes or clothing. Ensure that medical personnel are aware of the material(s) involved, take precautions to protect themselves and prevent spread of contamination.

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

<b>Symptoms</b>	Burning sensation. Coughing and/ or wheezing. Difficulty in breathing.
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### Indication of any immediate medical attention and special treatment needed

<b>Note to physicians</b>	Treat symptomatically.
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## 5. FIRE-FIGHTING MEASURES

<b>Suitable Extinguishing Media</b>	Use water. Do not use dry chemicals or foams. CO <sub>2</sub> or Halon may provide limited control. Flood fire area with water from a distance. Move containers from fire area if you can do it without risk. Cool containers with flooding quantities of water until well after fire is out.
<b>Unsuitable Extinguishing Media</b>	Dry chemical. Foam. Caution: Use of water spray when fighting fire may be inefficient.
<b>Specific hazards arising from the chemical</b>	These substances will accelerate burning when involved in a fire. Some may decompose explosively when heated or involved in a fire. May ignite combustibles (wood paper, oil, clothing, etc.). Runoff may create fire or explosion hazard.
<b>Hazardous combustion products</b>	Sodium oxides. Nitrogen oxides.
<b>Special protective equipment for fire-fighters</b>	Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear. Use personal protection equipment. Do not move cargo or vehicle if cargo has been exposed to heat. Oxidizer. May ignite combustibles (wood paper, oil, clothing, etc.). Move containers from fire area if you can do it without risk. Fight fire from maximum distance or use unmanned hose holders or monitor nozzles. ALWAYS stay away from tanks engulfed in fire. For massive fire, use unmanned hose holders or monitor nozzles; if this is impossible withdraw from area and let fire burn.

## 6. ACCIDENTAL RELEASE MEASURES

<b>U.S. Notice</b>	Only persons properly qualified to respond to an emergency involving hazardous substances may respond to a spill according to federal regulations (OSHA 29 CFR
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1910.120(a)(v)) and per your company's emergency response plan and guidelines/procedures. See Section 13, Special Instructions for disposal assistance. Outside of the US, only persons properly qualified according to state or local regulations should respond to a spill involving chemicals.

### **Personal precautions, protective equipment and emergency procedures**

<b>Personal precautions</b>	Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak. ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area). Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. See section 8 for more information. Stop leak if you can do it without risk. Avoid contact with skin, eyes or clothing. Ensure adequate ventilation. Avoid generation of dust. Do not breathe dust. Use personal protective equipment as required.
<b>Other Information</b>	Keep combustibles (wood, paper, oil, etc) away from spilled material. DO NOT GET WATER INSIDE CONTAINERS. Ventilate the area. Refer to protective measures listed in Sections 7 and 8.

### **Environmental precautions**

<b>Environmental precautions</b>	Prevent entry into waterways, sewers, basements or confined areas. Do not flush into surface water or sanitary sewer system. Prevent further leakage or spillage if safe to do so. Prevent product from entering drains.
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### **Methods and material for containment and cleaning up**

<b>Methods for containment</b>	Stop leak if you can do it without risk. Cover with DRY earth, DRY sand or other non-combustible material followed with plastic sheet to minimize spreading or contact with rain.
<b>Methods for cleaning up</b>	With clean shovel place material into clean, dry container and cover loosely; move containers from spill area. Flush area with flooding quantities of water. Prevent product from entering drains. Cover powder spill with plastic sheet or tarp to minimize spreading and keep powder dry. Take up mechanically, placing in appropriate containers for disposal.
<b>Prevention of secondary hazards</b>	Clean contaminated objects and areas thoroughly observing environmental regulations.
<b>Reference to other sections</b>	See section 8 for more information. See section 13 for more information.

## **7. HANDLING AND STORAGE**

### **Precautions for safe handling**

<b>Advice on safe handling</b>	Use personal protection equipment. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Remove contaminated clothing and shoes. Use with local exhaust ventilation. Avoid contact with skin, eyes or clothing. Handle in accordance with good industrial hygiene and safety practice. Avoid breathing dust/fume/gas/mist/vapors/spray. Avoid generation of dust. Do not eat, drink or smoke when using this product.
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### **Conditions for safe storage, including any incompatibilities**

<b>Storage Conditions</b>	Keep in properly labeled containers. Do not store near combustible materials. Keep containers tightly closed in a dry, cool and well-ventilated place. Keep out of the reach of children. Store in accordance with particular national and local regulations.
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<b>Flammability class</b>	Not applicable
---------------------------	----------------

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

### Control parameters

**Exposure Guidelines** This product, as supplied, does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies

### Appropriate engineering controls

**Engineering Controls** Showers  
 Eyewash stations  
 Ventilation systems.

### Individual protection measures, such as personal protective equipment

**Respiratory protection** No protective equipment is needed under normal use conditions. If exposure limits are exceeded or irritation is experienced, ventilation and evacuation may be required.

**Hand Protection** Impervious gloves. Wear suitable gloves. Barrier creams may help to protect the exposed areas of skin. Gloves must be inspected prior to use. The selected protective gloves have to satisfy the specifications of EU Directive 2016/425 and the standard EN 374 derived from it. Chemical resistant gloves made of butyl rubber or nitrile rubber category III according to EN 374-1:2016.

**Eye/face protection** Tight sealing safety goggles.

**Skin and body protection** Long sleeved clothing. Chemical resistant apron. Wear fire/flammable resistant/retardant clothing. Wear suitable protective clothing.

**General Hygiene Considerations** Remove and wash contaminated clothing and gloves, including the inside, before re-use. Contaminated work clothing should not be allowed out of the workplace. Regular cleaning of equipment, work area and clothing is recommended. Wash hands before breaks and immediately after handling the product. Avoid contact with skin, eyes or clothing. Wear suitable gloves and eye/face protection. Avoid breathing dust/fume/gas/mist/vapors/spray. Do not eat, drink or smoke when using this product.

**Environmental exposure controls** Local authorities should be advised if significant spillages cannot be contained. Do not allow into any sewer, on the ground or into any body of water.

**Thermal hazards** None under normal processing.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

### Information on basic physical and chemical properties

<b>Physical state</b>	Solid	<b>Color</b>	white
<b>Appearance</b>	crystalline	<b>Odor threshold</b>	No data available
<b>Odor</b>	Odorless		

Property	Values	Remarks • Method
<b>Molecular weight</b>	No data available	
<b>pH</b>	10	aqueous solution @ 20 °C
<b>Melting point / freezing point</b>	No data available	
<b>Initial boiling point and boiling range</b>	No data available	
<b>Evaporation rate</b>	Not applicable	
<b>Vapor pressure</b>	Not applicable	

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**Relative vapor density** No data available  
**Specific gravity - VALUE 1** No data available  
**Partition coefficient** log  $K_{ow}$  ~ -2.24  
**Soil Organic Carbon-Water Partition Coefficient** log  $K_{oc}$  ~ -1.15  
**Autoignition temperature** No data available  
**Decomposition temperature** 271.1 °C / 520 °F  
**Dynamic viscosity** Not applicable  
**Kinematic viscosity** Not applicable

### Solubility(ies)

#### Water solubility

Water solubility classification	Water solubility	Water Solubility Temperature
Soluble	> 1000 mg/L	25 °C / 77 °F

#### Solubility in other solvents

Chemical Name	Solubility classification	Solubility	Solubility Temperature
None reported	No information available	No data available	No information available

### Other information

#### Metal Corrosivity

**Steel Corrosion Rate** Not applicable  
**Aluminum Corrosion Rate** Not applicable

#### Volatile Organic Compounds (VOC) Content

Not applicable

Chemical name	CAS No	Volatile organic compounds (VOC) content	CAA (Clean Air Act)
Disodium carbonate	497-19-8	No data available	-
Sodium nitrite	7632-00-0	Not applicable	-

#### Explosive properties

**Upper explosion limit** No data available  
**Lower explosion limit** No data available

#### Flammable properties

**Flash point** Not applicable

#### Flammability Limit in Air

**Upper flammability limit:** No data available  
**Lower flammability limit:** No data available

#### Oxidizing properties

No data available.

#### Bulk density

No data available

## 10. STABILITY AND REACTIVITY

### Reactivity

Oxidizer.

### Chemical stability

May cause fire or explosion; strong oxidizer.

### Explosion data

**Sensitivity to Mechanical Impact** None.

**Sensitivity to Static Discharge** Yes.

### Possibility of hazardous reactions

None under normal processing.

### Hazardous polymerization

None under normal processing.

### Conditions to avoid

Heat, flames and sparks. Incompatible materials. Excessive heat.

### Incompatible materials

organic material. Combustible material. Hydrocarbons.

### Hazardous decomposition products

Nitrogen oxides. Sodium oxides.

## 11. TOXICOLOGICAL INFORMATION

### Information on likely routes of exposure

#### Product Information

<b>Inhalation</b>	May cause irritation of respiratory tract. Harmful by inhalation.
<b>Eye contact</b>	Causes serious eye irritation. May cause redness, itching, and pain.
<b>Skin contact</b>	May cause irritation. Prolonged contact may cause redness and irritation.
<b>Ingestion</b>	Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea. Toxic if swallowed.
<b>Symptoms</b>	May cause redness and tearing of the eyes. Coughing and/ or wheezing.

### Acute toxicity

Toxic if swallowed

Harmful if inhaled

### Mixture

No data available.

### Ingredient Acute Toxicity Data

Test data reported below.

### Oral Exposure Route

Chemical name	Endpoint type	Reported dose	Exposure time	Toxicological effects	Key literature references and sources for data
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Disodium carbonate (50 - 60%) CAS#: 497-19-8	Rat LD <sub>50</sub>	4090 mg/kg	None reported	None reported	IUCLID
Sodium nitrite (50 - 60%) CAS#: 7632-00-0	Rat LD <sub>50</sub>	85 mg/kg	None reported	None reported	IUCLID

#### Dermal Exposure Route

Chemical name	Endpoint type	Reported dose	Exposure time	Toxicological effects	Key literature references and sources for data
Disodium carbonate (50 - 60%) CAS#: 497-19-8	Mouse LD <sub>50</sub>	2210 mg/kg	None reported	None reported	No information available

#### Inhalation (Dust/Mist) Exposure Route

Chemical name	Endpoint type	Reported dose	Exposure time	Toxicological effects	Key literature references and sources for data
Disodium carbonate (50 - 60%) CAS#: 497-19-8	Rat LC <sub>50</sub>	1.15 mg/L	4 hours	None reported	IUCLID
Sodium nitrite (50 - 60%) CAS#: 7632-00-0	Rat LC <sub>50</sub>	5.5 mg/L	4 hours	None reported	LOLI

#### Unknown Acute Toxicity

0% of the mixture consists of ingredient(s) of unknown toxicity.

#### Acute Toxicity Estimations (ATE)

The following values are calculated based on chapter 3.1 of the GHS document

<b>ATEmix (oral)</b>	166.50 mg/kg
<b>ATEmix (dermal)</b>	4,420.00 mg/kg
<b>ATEmix (inhalation-dust/mist)</b>	2.30 mg/l
<b>ATEmix (inhalation-vapor)</b>	No information available
<b>ATEmix (inhalation-gas)</b>	No information available

#### Skin corrosion/irritation

Based on available data, the classification criteria are not met.

#### Mixture

No data available.

#### Ingredient Skin Corrosion/Irritation Data

Test data reported below.

Chemical name	Test method	Species	Reported dose	Exposure time	Results	Key literature references and sources for data
Disodium carbonate (50 - 60%) CAS#: 497-19-8	Standard Draize Test	Rabbit	500 mg	24 hours	Mild skin irritant	ECHA HSDB
Sodium nitrite (50 - 60%) CAS#: 7632-00-0	OECD Test 404: Acute Dermal Corrosion/Irritation	Rabbit	500 mg	24 hours	Not corrosive or irritating to skin	ECHA

#### Serious eye damage/irritation

Classification based on data available for ingredients. Irritating to eyes.



**Mixture**

No data available.

**Ingredient Eye Damage/Eye Irritation Data**

Test data reported below.

Chemical name	Test method	Species	Reported dose	Exposure time	Results	Key literature references and sources for data
Disodium carbonate (50 - 60%) CAS#: 497-19-8	Standard Draize Test	Rabbit	100 mg	24 hours	Eye irritant	HSDB
Sodium nitrite (50 - 60%) CAS#: 7632-00-0	Standard Draize Test	Rabbit	500 mg	24 hours	Eye irritant	RTECS

**Respiratory or skin sensitization**

Based on available data, the classification criteria are not met.

**Mixture**

No data available.

**Ingredient Sensitization Data**

No data available.

**STOT - single exposure**

Based on available data, the classification criteria are not met.

**Mixture**

No data available.

**Ingredient Specific Target Organ Toxicity Single Exposure Data**

Test data reported below.

**Oral Exposure Route**

Chemical name	Endpoint type	Reported dose	Exposure time	Toxicological effects	Key literature references and sources for data
Sodium nitrite (50 - 60%) CAS#: 7632-00-0	Human LD <sub>Lo</sub>	71 mg/kg	None reported	<b>Blood</b> Methemoglobinemia-Carboxyhe moglobin <b>Gastrointestinal</b> Gas	RTECS

**STOT - repeated exposure**

Based on available data, the classification criteria are not met.

**Mixture**

No data available.

**Ingredient Specific Target Organ Toxicity Repeat Exposure Data**

Test data reported below.

**Oral Exposure Route**

Chemical name	Endpoint type	Reported dose	Exposure time	Toxicological effects	Key literature references and sources for data
Sodium nitrite (50 - 60%) CAS#: 7632-00-0	Rat TD <sub>Lo</sub>	110 mg/kg	22 days	None reported	RTECS

**Inhalation (Dust/Mist) Exposure Route**

Chemical name	Endpoint type	Reported dose	Exposure time	Toxicological effects	Key literature references and sources for data
Sodium nitrite (50 - 60%) CAS#: 7632-00-0	Rat TC <sub>Lo</sub>	0.0003 mg/L	30 days	<b>Biochemical</b> Enzyme inhibition, induction, or change in blood or tissue levels (phosphatases, catalases)	RTECS

**Carcinogenicity**

Based on available data, the classification criteria are not met.

**Mixture**

No data available.

**Ingredient Carcinogenicity Data**

No data available.

Chemical name	CAS No	ACGIH	IARC	NTP	OSHA
Disodium carbonate	497-19-8	-	-	-	-
Sodium nitrite	7632-00-0	-	Group 2A	-	X

**Legend**

<b>ACGIH (American Conference of Governmental Industrial Hygienists)</b>	Does not apply
<b>IARC (International Agency for Research on Cancer)</b>	Group 2A - Probably Carcinogenic to Humans
<b>NTP (National Toxicology Program)</b>	Does not apply
<b>OSHA</b>	X - Present

**Germ cell mutagenicity**

Based on available data, the classification criteria are not met.

**Mixture invitro Data**

No data available.

**Substance invitro Data**

Test data reported below.

Chemical name	Test	Cell Strain	Reported dose	Exposure time	Results	Key literature references and sources for data
Sodium nitrite (50 - 60%) CAS#: 7632-00-0	Unscheduled DNA synthesis	Human HeLa Cell	6 mmol/L	None reported	Positive test result for mutagenicity	RTECS

**Mixture in vivo Data**

No data available.

**Substance in vivo Data**

Test data reported below.

**Oral Exposure Route**

Chemical name	Test	Species	Reported dose	Exposure time	Results	Key literature references and sources for data
Sodium nitrite (50 - 60%) CAS#: 7632-00-0	Cytogenetic analysis	Mouse	60 mg/kg	30 days	Positive test result for mutagenicity	RTECS

**Reproductive toxicity**

Based on available data, the classification criteria are not met.

**Mixture**

No data available.

**Ingredient Reproductive Toxicity Data**

Test data reported below.

**Oral Exposure Route**

Chemical name	Endpoint type	Reported dose	Exposure time	Toxicological effects	Key literature references and sources for data
Sodium nitrite (50 - 60%) CAS#: 7632-00-0	Rat TD <sub>Lo</sub>	280 mg/kg	None reported	<b>Effects on Embryo or Fetus</b> Fetal death Fetotoxicity (except death e.g. stunted fetus) <b>Specific Developmental Abnormalities</b> Blood and lymphatic systems (including spleen and marrow)	RTECS

**Aspiration hazard**

Based on available data, the classification criteria are not met.

**12. ECOLOGICAL INFORMATION**

**Ecotoxicity**

Very toxic to aquatic life with long lasting effects.

**Unknown aquatic toxicity**

0% of the mixture consists of components(s) of unknown hazards to the aquatic environment.

**Mixture**

**Aquatic Acute Toxicity**

No data available.

**Aquatic Chronic Toxicity**

No data available.

**Substance**

**Aquatic Acute Toxicity**

Test data reported below.

**Fish**

Chemical name	Exposure time	Species	Endpoint type	Reported dose	Key literature references and sources for data
Disodium carbonate (50 - 60%) CAS#: 497-19-8	96 hours	<i>Lepomis macrochirus</i>	LC <sub>50</sub>	300 mg/L	IUCLID
Sodium nitrite (50 - 60%) CAS#: 7632-00-0	96 hours	<i>Salmo gairdneri</i>	LC <sub>50</sub>	0.11 mg/L	ERMA

**Crustacea**

Chemical name	Exposure time	Species	Endpoint type	Reported dose	Key literature references and sources for data
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Disodium carbonate (50 - 60%) CAS#: 497-19-8	48 Hours	<i>Daphnia magna</i>	EC <sub>50</sub>	265 mg/L	IUCLID
Sodium nitrite (50 - 60%) CAS#: 7632-00-0	48 Hours	<i>Cherax quadricarinatus</i>	EC <sub>50</sub>	1.1 mg/L	ERMA

#### **Aquatic Chronic Toxicity**

No data available.

#### **Persistence and degradability**

##### **Mixture**

No data available.

##### Bioaccumulation

MATERIAL DOES NOT BIOACCUMULATE

##### **Mixture**

No data available.

##### **Partition coefficient**

log K<sub>ow</sub> ~ -2.24

##### **Mobility**

##### **Soil Organic Carbon-Water Partition Coefficient**

log K<sub>oc</sub> ~ -1.15

##### **Other adverse effects**

No information available

### 13. DISPOSAL CONSIDERATIONS

#### **Waste treatment methods**

##### **Waste from residues/unused products**

Should not be released into the environment. Dispose of in accordance with local regulations. Dispose of waste in accordance with environmental legislation.

##### **Contaminated packaging**

Do not reuse empty containers.

##### **US EPA Waste Number**

D001

##### **Special instructions for disposal**

Incinerate material at an E.P.A. approved hazardous waste facility.

### 14. TRANSPORT INFORMATION

#### **DOT**

**UN/ID no** UN1500  
**Proper shipping name** SODIUM NITRITE  
**Transport hazard class(es)** 5.1  
**Subsidiary class** 6.1  
**Packing Group** III  
**Emergency Response Guide Number** 141

#### **TDG**

**UN/ID no** UN1500  
**Proper shipping name** SODIUM NITRITE  
**Transport hazard class(es)** 5.1  
**Subsidiary class** 6.1

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**Packing Group** III

**IATA**

**UN number or ID number** UN1500  
**Proper shipping name** Sodium nitrite  
**Transport hazard class(es)** 5.1  
**Subsidiary hazard class** 6.1  
**Packing group** III  
**ERG Code** 5P  
**Special Provisions** A803  
**Description** UN1500, Sodium nitrite, 5.1 (6.1), III

**IMDG**

**UN number or ID number** UN1500  
**Proper shipping name** SODIUM NITRITE  
**Transport hazard class(es)** 5.1  
**Subsidiary hazard class** 6.1  
**Packing Group** III  
**EmS-No** F-A, S-Q  
**Marine pollutant** This material meets the definition of a marine pollutant  
**Description** UN1500, SODIUM NITRITE, 5.1 (6.1), III, Marine pollutant

**Additional information**

There is a possibility that this product could be contained in a reagent set or kit composed of various compatible dangerous goods. If the item is not in a reagent set or kit, the classification given above applies.

If the item is part of a reagent set or kit the classification would change to the following:

UN3316 Chemical Kit, Hazard Class 9, Packing Group II or III.

If the item is not regulated, the Chemical Kit classification does not apply.

**15. REGULATORY INFORMATION**

**National Inventories**

**TSCA** Complies  
**DSL/NDSL** Complies

**TSCA** - United States Toxic Substances Control Act Section 8(b) Inventory  
**DSL/NDSL** - Canadian Domestic Substances List/Non-Domestic Substances List

**International Inventories**

**EINECS/ELINCS** Complies  
**ENCS** Complies  
**IECSC** Complies  
**KECL** Complies  
**PICCS** Complies  
**TCSI** Complies  
**AICS** Complies  
**NZIoC** Complies

**EINECS/ELINCS** - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances  
**ENCS** - Japan Existing and New Chemical Substances  
**IECSC** - China Inventory of Existing Chemical Substances  
**KECL** - Korean Existing and Evaluated Chemical Substances  
**PICCS** - Philippines Inventory of Chemicals and Chemical Substances  
**TCSI** - Taiwan Chemical Substances Inventory  
**AICS** - Australian Inventory of Chemical Substances  
**NZIoC** - New Zealand Inventory of Chemicals

**US Federal Regulations**

**SARA 313**

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Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

Chemical name	SARA 313 - Threshold Values %
Sodium nitrite (CAS #: 7632-00-0)	1.0

**SARA 311/312 Hazard Categories**

Acute health hazard	Yes
Chronic Health Hazard	Yes
Fire hazard	No
Sudden release of pressure hazard	No
Reactive Hazard	No

**CWA (Clean Water Act)**

This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42)

Chemical name	CWA - Reportable Quantities	CWA - Toxic Pollutants	CWA - Priority Pollutants	CWA - Hazardous Substances
Sodium nitrite 7632-00-0	100 lb	-	-	X

**CERCLA**

This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material

Chemical name	Hazardous Substances RQs	CERCLA/SARA RQ	Reportable Quantity (RQ)
Sodium nitrite 7632-00-0	100 lb	-	RQ 100 lb final RQ RQ 45.4 kg final RQ

**US State Regulations**

**California Proposition 65**

This product does not contain any Proposition 65 chemicals

**U.S. State Right-to-Know Regulations**

This product may contain substances regulated by state right-to-know regulations.

Chemical name	New Jersey	Massachusetts	Pennsylvania
Sodium nitrite 7632-00-0	X	X	X

**U.S. EPA Label Information**

Chemical name	FIFRA	FDA
Disodium carbonate	180.1234	21 CFR 184.1742
Sodium nitrite	180.0920	-

**16. OTHER INFORMATION, INCLUDING DATE OF PREPARATION OF THE LAST REVISION**

**Special Comments**

None

**Additional information**

**Global Automotive Declarable Substance List (GADSL)**

Chemical name	Global Automotive Declarable Substance List Classifications	Global Automotive Declarable Substance List Thersholds
Sodium nitrite 7632-00-0	Declarable Substance (FI) Prohibited Substance (FI) Prohibited Substance (LR) Declarable Substance (LR)	0.1 %

**NFPA and HMIS Classifications**

<b>NFPA</b>	<b>Health hazards - 2</b>	<b>Flammability - 0</b>	<b>Instability - 1</b>	<b>Physical and chemical properties OX</b>
<b>HMIS</b>	<b>Health hazards - 2</b>	<b>Flammability - 0</b>	<b>Physical hazards - 1</b>	<b>Personal protection - X -1</b>

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

ACGIH	ACGIH (American Conference of Governmental Industrial Hygienists)
ATSDR	ATSDR (Agency for Toxic Substances and Disease Registry)
CCRIS	CCRIS (Chemical Carcinogenesis Research Information System)
CDC	CDC (Center for Disease Control)
CEPA	CEPA (Canadian Environmental Protection Agency)
CICAD	CICAD (Concise International Chemical Assessment Documents)
ECHA	ECHA (The European Chemicals Agency)
EEA	EEA (European Environment Agency)
EPA	EPA (Environmental Protection Agency)
ERMA	ERMA (New Zealands Environmental Risk Management Authority)
ECOSARS	Estimation through ECOSARS v1.11 part of the Estimation Programs Interface (EPI) Suite™
FDA	FDA (Food & Drug Administration)
GESTIS	GESTIS (Information System on Hazardous Substances of the German Social Accident Insurance)
HSDB	HSDB (Hazardous Substances Data Bank)
INERIS	INERIS (The National Industrial Environment and Risks Institute)
IPCS INCHEM	IPCS INCHEM (International Programme on Chemical Safety)
IUCLID	IUCLID (The International Uniform Chemical Information Database)
NITE	Japan National Institute of Technology and Evaluation (NITE)
NIH	NIH (National Institutes of Health)
NIOSH	NIOSH (National Institute for Occupational Safety and Health)
LOLI	LOLI (List of Lists - An International Chemical Regulatory Database)
NDF	no data
NICNAS	Australia National Industrial Chemicals Notification and Assessment Scheme (NICNAS)
NIOSH IDLH	Immediately Dangerous to Life or Health
OSHA	OSHA (Occupational Safety and Health Administration of the US Department of Labor)
PEEN	PEEN (Pan European Ecological Network)
RTECS	RTECS (Registry of Toxic Effects of Chemical Substances)
SIDS	SIDS (Screening Information Dataset) for High Volume Chemicals
SYKE	The Finnish Environment Institute (SYKE)
USDA	USDA (United States Department of Agriculture)
USDC	USDC (United States Department of Commerce)
WHO	WHO (World Health Organization)

**Legend - Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION**

TWA	TWA (time-weighted average)	STEL	STEL (Short Term Exposure Limit)
MAC	Maximum Allowable Concentration	Ceiling	Ceiling Limit Value
X	Listed	Vacated	These values have no official status. The only binding levels of contaminants are those listed in the final OSHA PEL. These lists are for

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reference purposes only. Please note that some reference state regulations of these "liberated" exposure limits in their state regulations.

SKN*	Skin designation	SKN+	Skin sensitization
RSP+	Respiratory sensitization	**	Hazard Designation
C	Carcinogen	R	Reproductive toxicant
M	mutagen		

**Prepared By** Hach Product Compliance Department

**Issue Date** 15-Jan-2019

**Revision Date** 26-Jan-2024

**Revision Note** None

**Disclaimer**

**USER RESPONSIBILITY:** Each user should read and understand this information and incorporate it in individual site safety programs in accordance with applicable hazard communication standards and regulations.

**THE INFORMATION CONTAINED HEREIN IS BASED ON DATA CONSIDERED TO BE ACCURATE. HOWEVER, NO WARRANTY IS EXPRESSED OR IMPLIED REGARDING THE ACCURACY OF THESE DATA OR THE RESULTS TO BE OBTAINED FROM THE USE THEREOF.**

**HACH COMPANY©2023**

**End of Safety Data Sheet**





**Be Right™**

# SAFETY DATA SHEET

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## 1. IDENTIFICATION

### Product identifier

**Product Name** HgEx™ 6 Complexing Reagent

### Other means of identification

**Product Code(s)** 2658748

**Safety data sheet number** M01089

### Recommended use of the chemical and restrictions on use

**Recommended Use** Determination of mercury. Water Analysis.

**Uses advised against** None.

**Restrictions on use** None.

### Details of the supplier of the safety data sheet

#### **Manufacturer Address**

Hach Company, P.O.Box 389, Loveland, CO 80539, USA, +1(970) 669-3050

#### **Emergency telephone number**

+1(303) 623-5716 - 24 Hour Service

## 2. HAZARDS IDENTIFICATION

### Classification

#### **Regulatory Status**

This chemical is not considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Not a dangerous substance or mixture according to the Globally Harmonized System (GHS)

#### **Hazards not otherwise classified (HNOC)**

Not applicable

### Label elements

#### **Signal word**

None

#### **Hazard statements**

The product contains no substances which at their given concentration, are considered to be hazardous to health

### Other Hazards Known

May be harmful if swallowed

## 3. COMPOSITION/INFORMATION ON INGREDIENTS

**Substance**  
Not applicable

**Mixture**

#### 4. FIRST AID MEASURES

##### Description of first aid measures

<b>General advice</b>	No hazards which require special first aid measures. Use first aid treatment according to the nature of the injury.
<b>Inhalation</b>	Remove to fresh air.
<b>Eye contact</b>	Rinse thoroughly with plenty of water for at least 15 minutes, lifting lower and upper eyelids. Consult a physician.
<b>Skin contact</b>	Wash skin with soap and water.
<b>Ingestion</b>	Clean mouth with water and drink afterwards plenty of water.

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

**Symptoms** See Section 11 for additional Toxicological Information.

##### Indication of any immediate medical attention and special treatment needed

**Note to physicians** Treat symptomatically.

#### 5. FIRE-FIGHTING MEASURES

<b>Suitable Extinguishing Media</b>	Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
<b>Unsuitable Extinguishing Media</b>	Caution: Use of water spray when fighting fire may be inefficient.
<b>Specific hazards arising from the chemical</b>	No information available.
<b>Hazardous combustion products</b>	Carbon oxides. Nitrogen oxides (NOx). Sulfur oxides.
<b>Special protective equipment for fire-fighters</b>	Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear. Use personal protection equipment.

#### 6. ACCIDENTAL RELEASE MEASURES

**U.S. Notice** Only persons properly qualified to respond to an emergency involving hazardous substances may respond to a spill according to federal regulations (OSHA 29 CFR 1910.120(a)(v)) and per your company's emergency response plan and guidelines/procedures. See Section 13, Special Instructions for disposal assistance. Outside of the US, only persons properly qualified according to state or local regulations should respond to a spill involving chemicals.

##### Personal precautions, protective equipment and emergency procedures

**Personal precautions** Ensure adequate ventilation.

### Environmental precautions

**Environmental precautions** See Section 12 for additional ecological information.

### Methods and material for containment and cleaning up

**Methods for containment** Prevent further leakage or spillage if safe to do so.

**Methods for cleaning up** Take up mechanically, placing in appropriate containers for disposal.

**Prevention of secondary hazards** Clean contaminated objects and areas thoroughly observing environmental regulations.

**Reference to other sections** See section 8 for more information. See section 13 for more information.

## 7. HANDLING AND STORAGE

### Precautions for safe handling

**Advice on safe handling** Handle in accordance with good industrial hygiene and safety practice.

### Conditions for safe storage, including any incompatibilities

**Storage Conditions** Keep containers tightly closed in a dry, cool and well-ventilated place.

**Flammability class** Not applicable

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

### Control parameters

**Exposure Guidelines** This product, as supplied, does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies

### Appropriate engineering controls

#### **Engineering Controls**

Showers  
Eyewash stations  
Ventilation systems. Technical measures and appropriate working operations should be given priority over the use of personal protective equipment. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

### Individual protection measures, such as personal protective equipment

#### **Respiratory protection**

No protective equipment is needed under normal use conditions. If exposure limits are exceeded or irritation is experienced, ventilation and evacuation may be required. Ensure adequate ventilation. Wear breathing apparatus if exposed to vapors/dusts/aerosols.

#### **Hand Protection**

Wear suitable gloves. Barrier creams may help to protect the exposed areas of skin. Gloves must be inspected prior to use. The selected protective gloves have to satisfy the specifications of EU Directive 2016/425 and the standard EN 374 derived from it. Chemical resistant gloves made of butyl rubber or nitrile rubber category III according to EN 374-1:2016.

#### **Eye/face protection**

Wear safety glasses with side shields (or goggles).

#### **Skin and body protection**

No special protective equipment required. Avoid contact with eyes, skin and clothing.

#### **General Hygiene Considerations**

Handle in accordance with good industrial hygiene and safety practice.

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**Environmental exposure controls** Local authorities should be advised if significant spillages cannot be contained. Do not allow into any sewer, on the ground or into any body of water.

**Thermal hazards** None under normal processing.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

### Information on basic physical and chemical properties

**Physical state** Solid  
**Appearance** crystalline  
**Color** white  
**Odor** Odorless  
**Odor threshold** No data available

<u>Property</u>	<u>Values</u>	<u>Remarks • Method</u>
<b>Molecular weight</b>	No data available	
<b>pH</b>	No data available	
<b>Melting point / freezing point</b>	219 °C / 426.2 °F	
<b>Initial boiling point and boiling range</b>	No data available	
<b>Evaporation rate</b>	Not applicable	
<b>Vapor pressure</b>	Not applicable	
<b>Relative vapor density</b>	No data available	
<b>Specific gravity - VALUE 1</b>	1.82	
<b>Partition coefficient</b>	log K <sub>ow</sub> ~ 0	
<b>Soil Organic Carbon-Water Partition Coefficient</b>	log K <sub>oc</sub> ~ 0	
<b>Autoignition temperature</b>	No data available	
<b>Decomposition temperature</b>	No data available	
<b>Dynamic viscosity</b>	Not applicable	
<b>Kinematic viscosity</b>	Not applicable	

### Solubility(ies)

#### Water solubility

<u>Water solubility classification</u>	<u>Water solubility</u>	<u>Water Solubility Temperature</u>
Soluble	> 1000 mg/L	25 °C / 77 °F

#### Solubility in other solvents

<u>Chemical Name</u>	<u>Solubility classification</u>	<u>Solubility</u>	<u>Solubility Temperature</u>
Acid	Soluble	> 1000 mg/L	25 °C / 77 °F

### Other information

#### Metal Corrosivity

**Steel Corrosion Rate** Not applicable

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**Aluminum Corrosion Rate**

Not applicable

**Volatile Organic Compounds (VOC) Content**

Not applicable

**Explosive properties**

**Upper explosion limit**

No data available

**Lower explosion limit**

No data available

**Flammable properties**

**Flash point**

Not applicable

**Flammability Limit in Air**

**Upper flammability limit:**

No data available

**Lower flammability limit:**

No data available

**Oxidizing properties**

No data available.

**Bulk density**

No data available

## 10. STABILITY AND REACTIVITY

**Reactivity**

Not applicable.

**Chemical stability**

Stable under normal conditions.

**Explosion data**

**Sensitivity to Mechanical Impact** None.

**Sensitivity to Static Discharge** None.

**Possibility of hazardous reactions**

None under normal processing.

**Hazardous polymerization**

None under normal processing.

**Conditions to avoid**

None known based on information supplied.

**Incompatible materials**

Strong oxidizing agents, strong acids, and strong bases.

**Hazardous decomposition products**

Carbon oxides. Nitrogen oxides (NOx). Sulfur oxides.

## 11. TOXICOLOGICAL INFORMATION

**Information on likely routes of exposure**

**Product Information**

**Inhalation**

No known effect based on information supplied.

**Eye contact**

No known effect based on information supplied.

**Skin contact** No known effect based on information supplied.

**Ingestion** No known effect based on information supplied.

**Symptoms** No information available.

**Acute toxicity**

Based on available data, the classification criteria are not met

**Mixture**

No data available.

**Ingredient Acute Toxicity Data**

No data available.

**Unknown Acute Toxicity**

0% of the mixture consists of ingredient(s) of unknown toxicity.

**Acute Toxicity Estimations (ATE)**

The following values are calculated based on chapter 3.1 of the GHS document

<b>ATEmix (oral)</b>	2,137.00 mg/kg
<b>ATEmix (dermal)</b>	No information available
<b>ATEmix (inhalation-dust/mist)</b>	No information available
<b>ATEmix (inhalation-vapor)</b>	No information available
<b>ATEmix (inhalation-gas)</b>	No information available

**Skin corrosion/irritation**

Based on available data, the classification criteria are not met.

**Mixture**

No data available.

**Ingredient Skin Corrosion/Irritation Data**

No data available.

**Serious eye damage/irritation**

Based on available data, the classification criteria are not met.

**Mixture**

No data available.

**Ingredient Eye Damage/Eye Irritation Data**

No data available.

**Respiratory or skin sensitization**

Based on available data, the classification criteria are not met.

**Mixture**

No data available.

**Ingredient Sensitization Data**

No data available.

**STOT - single exposure**

Based on available data, the classification criteria are not met.

**Mixture**

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No data available.

**Ingredient Specific Target Organ Toxicity Single Exposure Data**

No data available.

**STOT - repeated exposure**

Based on available data, the classification criteria are not met.

**Mixture**

No data available.

**Ingredient Specific Target Organ Toxicity Repeat Exposure Data**

No data available.

**Carcinogenicity**

Based on available data, the classification criteria are not met.

**Mixture**

No data available.

**Ingredient Carcinogenicity Data**

No data available.

**Legend**

<b>ACGIH (American Conference of Governmental Industrial Hygienists)</b>	Does not apply
<b>IARC (International Agency for Research on Cancer)</b>	Does not apply
<b>NTP (National Toxicology Program)</b>	Does not apply
<b>OSHA</b>	Does not apply

**Germ cell mutagenicity**

Based on available data, the classification criteria are not met.

**Mixture invitro Data**

No data available.

**Substance invitro Data**

No data available.

**Mixture in vivo Data**

No data available.

**Substance in vivo Data**

No data available.

**Reproductive toxicity**

Based on available data, the classification criteria are not met.

**Mixture**

No data available.

**Ingredient Reproductive Toxicity Data**

No data available.

**Aspiration hazard**

Based on available data, the classification criteria are not met.

**12. ECOLOGICAL INFORMATION**

**Ecotoxicity**

Based on available data, the classification criteria are not met.

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**Unknown aquatic toxicity** 0% of the mixture consists of components(s) of unknown hazards to the aquatic environment.

**Mixture**

**Aquatic Acute Toxicity**  
No data available.

**Aquatic Chronic Toxicity**  
No data available.

**Substance**

**Aquatic Acute Toxicity**  
No data available.

**Aquatic Chronic Toxicity**  
No data available.

**Persistence and degradability**

**Mixture**  
No data available.

**Bioaccumulation**  
MATERIAL DOES NOT BIOACCUMULATE

**Mixture**  
No data available.

**Partition coefficient** log  $K_{ow}$  ~ 0

**Mobility**

**Soil Organic Carbon-Water Partition Coefficient** log  $K_{oc}$  ~ 0

**Other adverse effects**  
No information available

**13. DISPOSAL CONSIDERATIONS**

**Waste treatment methods**

**Waste from residues/unused products** Dispose of in accordance with local regulations. Dispose of waste in accordance with environmental legislation.

**Contaminated packaging** Do not reuse empty containers.

**Special instructions for disposal** Dilute to 3 to 5 times the volume with cold water. Open cold water tap completely, slowly pour the material to the drain.

**14. TRANSPORT INFORMATION**

**DOT** Not regulated

**TDG** Not regulated

**IATA** Not regulated



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**IMDG** Not regulated

**Additional information**

There is a possibility that this product could be contained in a reagent set or kit composed of various compatible dangerous goods. If the item is not in a reagent set or kit, the classification given above applies.  
If the item is part of a reagent set or kit the classification would change to the following:  
UN3316 Chemical Kit, Hazard Class 9, Packing Group II or III.  
If the item is not regulated, the Chemical Kit classification does not apply.

**15. REGULATORY INFORMATION**

**National Inventories**

**TSCA** Complies  
**DSL/NDSL** Complies

**TSCA** - United States Toxic Substances Control Act Section 8(b) Inventory  
**DSL/NDSL** - Canadian Domestic Substances List/Non-Domestic Substances List

**International Inventories**

**EINECS/ELINCS** Complies  
**ENCS** Complies  
**IECSC** Complies  
**KECL** Complies  
**PICCS** Complies  
**TCSI** Complies  
**AICS** Complies  
**NZIoC** Complies

**EINECS/ELINCS** - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances  
**ENCS** - Japan Existing and New Chemical Substances  
**IECSC** - China Inventory of Existing Chemical Substances  
**KECL** - Korean Existing and Evaluated Chemical Substances  
**PICCS** - Philippines Inventory of Chemicals and Chemical Substances  
**TCSI** - Taiwan Chemical Substances Inventory  
**AICS** - Australian Inventory of Chemical Substances  
**NZIoC** - New Zealand Inventory of Chemicals

**US Federal Regulations**

**SARA 313**

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

**SARA 311/312 Hazard Categories**

<b>Acute health hazard</b>	Yes
<b>Chronic Health Hazard</b>	No
<b>Fire hazard</b>	No
<b>Sudden release of pressure hazard</b>	No
<b>Reactive Hazard</b>	No

**CWA (Clean Water Act)**

This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42)

**CERCLA**

This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material

## US State Regulations

### California Proposition 65

This product does not contain any Proposition 65 chemicals

### U.S. State Right-to-Know Regulations

This product does not contain any substances regulated by state right-to-know regulations.

### U.S. EPA Label Information

## 16. OTHER INFORMATION, INCLUDING DATE OF PREPARATION OF THE LAST REVISION

### Special Comments

None

### Additional information

#### **Global Automotive Declarable Substance List (GADSL)**

Not applicable

#### **NFPA and HMIS Classifications**

NFPA	Health hazards - 0	Flammability - 0	Instability - 0	Physical and chemical properties -
HMIS	Health hazards - 1	Flammability - 0	Physical hazards - 0	Personal protection - X - 1

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

ACGIH	ACGIH (American Conference of Governmental Industrial Hygienists)
ATSDR	ATSDR (Agency for Toxic Substances and Disease Registry)
CCRIS	CCRIS (Chemical Carcinogenesis Research Information System)
CDC	CDC (Center for Disease Control)
CEPA	CEPA (Canadian Environmental Protection Agency)
CICAD	CICAD (Concise International Chemical Assessment Documents)
ECHA	ECHA (The European Chemicals Agency)
EEA	EEA (European Environment Agency)
EPA	EPA (Environmental Protection Agency)
ERMA	ERMA (New Zealand's Environmental Risk Management Authority)
ECOSARS	Estimation through ECOSARS v1.11 part of the Estimation Programs Interface (EPI) Suite™
FDA	FDA (Food & Drug Administration)
GESTIS	GESTIS (Information System on Hazardous Substances of the German Social Accident Insurance)
HSDB	HSDB (Hazardous Substances Data Bank)
INERIS	INERIS (The National Industrial Environment and Risks Institute)
IPCS INCHEM	IPCS INCHEM (International Programme on Chemical Safety)
IUCLID	IUCLID (The International Uniform Chemical Information Database)
NITE	Japan National Institute of Technology and Evaluation (NITE)
NIH	NIH (National Institutes of Health)
NIOSH	NIOSH (National Institute for Occupational Safety and Health)
LOLI	LOLI (List of Lists - An International Chemical Regulatory Database)
NDF	no data
NICNAS	Australia National Industrial Chemicals Notification and Assessment Scheme (NICNAS)
NIOSH IDLH	Immediately Dangerous to Life or Health
OSHA	OSHA (Occupational Safety and Health Administration of the US Department of Labor)
PEEN	PEEN (Pan European Ecological Network)
RTECS	RTECS (Registry of Toxic Effects of Chemical Substances)

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SIDS	SIDS (Screening Information Dataset) for High Volume Chemicals
SYKE	The Finnish Environment Institute (SYKE)
USDA	USDA (United States Department of Agriculture)
USDC	USDC (United States Department of Commerce)
WHO	WHO (World Health Organization)

**Legend - Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION**

TWA	TWA (time-weighted average)	STEL	STEL (Short Term Exposure Limit)
MAC	Maximum Allowable Concentration	Ceiling	Ceiling Limit Value
X	Listed	Vacated	These values have no official status. The only binding levels of contaminants are those listed in the final OSHA PEL. These lists are for reference purposes only. Please note that some reference state regulations of these "liberated" exposure limits in their state regulations.
SKN*	Skin designation	SKN+	Skin sensitization
RSP+	Respiratory sensitization	**	Hazard Designation
C	Carcinogen	R	Reproductive toxicant
M	mutagen		

**Prepared By** Hach Product Compliance Department

**Issue Date** 16-08-2019

**Revision Date** 26-Jan-2024

**Revision Note** None

**Disclaimer**

**USER RESPONSIBILITY:** Each user should read and understand this information and incorporate it in individual site safety programs in accordance with applicable hazard communication standards and regulations.

**THE INFORMATION CONTAINED HEREIN IS BASED ON DATA CONSIDERED TO BE ACCURATE. HOWEVER, NO WARRANTY IS EXPRESSED OR IMPLIED REGARDING THE ACCURACY OF THESE DATA OR THE RESULTS TO BE OBTAINED FROM THE USE THEREOF.**

HACH COMPANY©2023

**End of Safety Data Sheet**



Be Right™

# SAFETY DATA SHEET

Issue Date 30-12-2019

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Version 3.3

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## 1. IDENTIFICATION

### Product identifier

**Product Name** HgEx™ Reagent A Stannous Sulfate Solution Ampules

### Other means of identification

**Product Code(s)** 2658825

**Safety data sheet number** M01384

**UN/ID no** UN3264

### Recommended use of the chemical and restrictions on use

**Recommended Use** Determination of mercury.

**Uses advised against**

**Restrictions on use** None.

### Details of the supplier of the safety data sheet

#### **Manufacturer Address**

Hach Company, P.O.Box 389, Loveland, CO 80539, USA, +1(970) 669-3050

#### **Emergency telephone number**

+1(303) 623-5716 - 24 Hour Service

## 2. HAZARDS IDENTIFICATION

### Classification

#### **Regulatory Status**

This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Corrosive to metals	Category 1
Skin corrosion/irritation	Category 1
Serious eye damage/eye irritation	Category 1
Skin sensitization	Category 1
Mutagenicity	Category 2
Reproductive toxicity	Category 2
Specific target organ toxicity (repeated exposure)	Category 2
Chronic aquatic toxicity	Category 2

#### **Hazards not otherwise classified (HNOC)**

Not applicable

#### **Label elements**

##### **Signal word**

Danger

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#### Hazard statements

H290 - May be corrosive to metals

H314 - Causes severe skin burns and eye damage

H317 - May cause an allergic skin reaction

H341 - Suspected of causing genetic defects

H361 - Suspected of damaging fertility or the unborn child

H373 - May cause damage to organs through prolonged or repeated exposure

H411 - Toxic to aquatic life with long lasting effects

#### Precautionary statements

P280 - Wear protective gloves, protective clothing, eye protection, and face protection

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 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

P310 - Immediately call a POISON CENTER or doctor/physician

P363 - Wash contaminated clothing before reuse

P405 - Store locked up

P501 - Dispose of contents/ container to an approved waste disposal plant

P272 - Contaminated work clothing should not be allowed out of the workplace

P201 - Obtain special instructions before use

P308 + P313 - IF exposed or concerned: Get medical advice/attention

P260 - Do not breathe dust/fume/gas/mist/vapors/spray

P273 - Avoid release to the environment

P391 - Collect spillage

P234 - Keep only in original container

P390 - Absorb spillage to prevent material damage

#### Other Hazards Known

Toxic to aquatic life

### 3. COMPOSITION/INFORMATION ON INGREDIENTS

#### Substance

Not applicable

#### Mixture

Chemical Family Mixture.

Percent ranges are used where confidential product information is applicable.

Chemical name	CAS No	Percent Range	HMRIC #
---------------	--------	---------------	---------

Sulfuric acid, tin(2+) salt (1:1)	7488-55-3	<10%	-
Sulfuric acid	7664-93-9	1 - 5%	-

#### 4. FIRST AID MEASURES

##### Description of first aid measures

<b>General advice</b>	Show this safety data sheet to the doctor in attendance. Immediate medical attention is required.
<b>Inhalation</b>	Remove to fresh air. If breathing has stopped, give artificial respiration. Get medical attention immediately. Do not use mouth-to-mouth method if victim ingested or inhaled the substance; give artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. If breathing is difficult, (trained personnel should) give oxygen. Delayed pulmonary edema may occur. Get immediate medical advice/attention.
<b>Eye contact</b>	Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Keep eye wide open while rinsing. Do not rub affected area. Get immediate medical advice/attention.
<b>Skin contact</b>	Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. Get immediate medical advice/attention. May cause an allergic skin reaction.
<b>Ingestion</b>	Clean mouth with water and drink afterwards plenty of water. Never give anything by mouth to an unconscious person. Do NOT induce vomiting. Get immediate medical advice/attention.
<b>Self-protection of the first aider</b>	Avoid contact with skin, eyes or clothing. Ensure that medical personnel are aware of the material(s) involved, take precautions to protect themselves and prevent spread of contamination. Avoid direct contact with skin. Use barrier to give mouth-to-mouth resuscitation.

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

<b>Symptoms</b>	Burning sensation. Itching. Rashes. Hives.
-----------------	--

##### Indication of any immediate medical attention and special treatment needed

<b>Note to physicians</b>	Product is a corrosive material. Use of gastric lavage or emesis is contraindicated. Possible perforation of stomach or esophagus should be investigated. Do not give chemical antidotes. Asphyxia from glottal edema may occur. Marked decrease in blood pressure may occur with moist rales, frothy sputum, and high pulse pressure. May cause sensitization in susceptible persons. Treat symptomatically.
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#### 5. FIRE-FIGHTING MEASURES

<b>Suitable Extinguishing Media</b>	Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
<b>Unsuitable Extinguishing Media</b>	Caution: Use of water spray when fighting fire may be inefficient.
<b>Specific hazards arising from the chemical</b>	The product causes burns of eyes, skin and mucous membranes. Thermal decomposition can lead to release of irritating gases and vapors. Product is or contains a sensitizer. May cause sensitization by skin contact.
<b>Hazardous combustion products</b>	This material will not burn.
<b>Special protective equipment for</b>	Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear.

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fire-fighters Use personal protection equipment.

## 6. ACCIDENTAL RELEASE MEASURES

**U.S. Notice** Only persons properly qualified to respond to an emergency involving hazardous substances may respond to a spill according to federal regulations (OSHA 29 CFR 1910.120(a)(v)) and per your company's emergency response plan and guidelines/procedures. See Section 13, Special Instructions for disposal assistance. Outside of the US, only persons properly qualified according to state or local regulations should respond to a spill involving chemicals.

### Personal precautions, protective equipment and emergency procedures

**Personal precautions** Avoid contact with skin, eyes or clothing. Ensure adequate ventilation. Use personal protective equipment as required. Attention! Corrosive material. Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak.

**Other Information** Refer to protective measures listed in Sections 7 and 8.

### Environmental precautions

**Environmental precautions** Prevent further leakage or spillage if safe to do so. Should not be released into the environment. Do not allow to enter into soil/subsoil. Prevent product from entering drains.

### Methods and material for containment and cleaning up

**Methods for containment** Prevent further leakage or spillage if safe to do so.

**Methods for cleaning up** Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust). Take up mechanically, placing in appropriate containers for disposal.

**Prevention of secondary hazards** Clean contaminated objects and areas thoroughly observing environmental regulations.

**Reference to other sections** See section 8 for more information. See section 13 for more information.

## 7. HANDLING AND STORAGE

### Precautions for safe handling

**Advice on safe handling** Handle in accordance with good industrial hygiene and safety practice. Avoid contact with skin, eyes or clothing. In case of insufficient ventilation, wear suitable respiratory equipment. Handle product only in closed system or provide appropriate exhaust ventilation. Do not eat, drink or smoke when using this product. Take off contaminated clothing and wash before reuse. Remove contaminated clothing and shoes.

### Conditions for safe storage, including any incompatibilities

**Storage Conditions** Keep containers tightly closed in a dry, cool and well-ventilated place. Protect from moisture. Store locked up. Keep out of the reach of children. Store away from other materials.

**Flammability class** Not applicable

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

### Control parameters

**Exposure Guidelines**

Chemical name	ACGIH TLV	OSHA PEL	NIOSH
Sulfuric acid, tin(2+) salt (1:1) CAS#: 7488-55-3	TWA: 2 mg/m <sup>3</sup> Sn inhalable particulate matter excluding Tin hydride and Indium tin oxide	TWA: 2 mg/m <sup>3</sup> (vacated) TWA: 2 mg/m <sup>3</sup>	IDLH: 100 mg/m <sup>3</sup> Sn TWA: 2 mg/m <sup>3</sup> except Tin oxides Sn
Sulfuric acid CAS#: 7664-93-9	TWA: 0.2 mg/m <sup>3</sup> thoracic particulate matter	TWA: 1 mg/m <sup>3</sup> (vacated) TWA: 1 mg/m <sup>3</sup>	IDLH: 15 mg/m <sup>3</sup> TWA: 1 mg/m <sup>3</sup>

**Appropriate engineering controls****Engineering Controls**

Showers  
Eyewash stations  
Ventilation systems.

**Individual protection measures, such as personal protective equipment****Respiratory protection**

No protective equipment is needed under normal use conditions. If exposure limits are exceeded or irritation is experienced, ventilation and evacuation may be required.

**Hand Protection**

Wear suitable gloves. Impervious gloves. Barrier creams may help to protect the exposed areas of skin. Gloves must be inspected prior to use. The selected protective gloves have to satisfy the specifications of EU Directive 2016/425 and the standard EN 374 derived from it. Chemical resistant gloves made of butyl rubber or nitrile rubber category III according to EN 374-1:2016.

**Eye/face protection**

Face protection shield.

**Skin and body protection**

Wear suitable protective clothing. Long sleeved clothing. Chemical resistant apron. Avoid contact with eyes, skin and clothing. Wash contaminated clothing before reuse.

**General Hygiene Considerations**

Wear suitable gloves and eye/face protection. Do not eat, drink or smoke when using this product. Regular cleaning of equipment, work area and clothing is recommended. Avoid contact with skin, eyes or clothing. Remove and wash contaminated clothing and gloves, including the inside, before re-use. Contaminated work clothing should not be allowed out of the workplace. Wash hands before breaks and immediately after handling the product.

**Environmental exposure controls**

Local authorities should be advised if significant spillages cannot be contained. Do not allow into any sewer, on the ground or into any body of water.

**Thermal hazards**

None under normal processing.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

**Information on basic physical and chemical properties**

<b>Physical state</b>	Liquid	<b>Color</b>	dark green
<b>Appearance</b>	aqueous solution	<b>Odor threshold</b>	Not applicable
<b>Odor</b>	Odorless		

<u>Property</u>	<u>Values</u>	<u>Remarks • Method</u>
<b>Molecular weight</b>	Not applicable	
<b>pH</b>	< 1	@ 20 °C
<b>Melting point / freezing point</b>	~ -3 °C / 26.6 °F	
<b>Initial boiling point and boiling range</b>	~ 101 °C / 213.8 °F	



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Evaporation rate 0.94 (water = 1)  
Vapor pressure 17.252 mm Hg / 2.3 kPa at 20 °C / 68 °F  
Relative vapor density 0.62  
Specific gravity - VALUE 1 1.10  
Partition coefficient Not applicable  
Soil Organic Carbon-Water Partition Coefficient Not applicable  
Autoignition temperature No data available  
Decomposition temperature No data available  
Dynamic viscosity ~ 2 cP (mPa s) at 20 °C / 68 °F  
Kinematic viscosity ~ 1.818 cSt (mm<sup>2</sup>/s) at 20 °C / 68 °F

#### Solubility(ies)

##### Water solubility

Water solubility classification	Water solubility	Water Solubility Temperature
Soluble	> 1000 mg/L	25 °C / 77 °F

##### Solubility in other solvents

Chemical Name	Solubility classification	Solubility	Solubility Temperature
Acid	Soluble	> 1000 mg/L	25 °C / 77 °F
Ethyl alcohol	Soluble	> 1000 mg/L	25 °C / 77 °F

#### Other information

##### Metal Corrosivity

Steel Corrosion Rate 62.03 mm/yr  
Aluminum Corrosion Rate 3.96 mm/yr / 0.16 in/yr

##### Volatile Organic Compounds (VOC) Content

Chemical name	CAS No	Volatile organic compounds (VOC) content	CAA (Clean Air Act)
Sulfuric acid, tin(2+) salt (1:1)	7488-55-3	Not applicable	-
Sulfuric acid	7664-93-9	No data available	-

##### Explosive properties

Upper explosion limit No data available  
Lower explosion limit No data available

##### Flammable properties

Flash point No data available

##### Flammability Limit in Air

Upper flammability limit: No data available

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**Lower flammability limit:**

No data available

**Oxidizing properties**

No data available.

**Bulk density**

No data available

## 10. STABILITY AND REACTIVITY

### Reactivity

Not applicable. Corrosive to metal.

### Chemical stability

Stable under normal conditions.

### Explosion data

**Sensitivity to Mechanical Impact** None.

**Sensitivity to Static Discharge** None.

### Possibility of hazardous reactions

None under normal processing.

### Hazardous polymerization

None under normal processing.

### Conditions to avoid

Exposure to air or moisture over prolonged periods.

### Incompatible materials

Oxidizing agent. Acids. Bases.

### Hazardous decomposition products

Thermal decomposition can lead to release of irritating and toxic gases and vapors.

## 11. TOXICOLOGICAL INFORMATION

### Information on likely routes of exposure

#### Product Information

##### **Inhalation**

Corrosive by inhalation. Inhalation of corrosive fumes/gases may cause coughing, choking, headache, dizziness, and weakness for several hours. Pulmonary edema may occur with tightness in the chest, shortness of breath, bluish skin, decreased blood pressure, and increased heart rate. Inhaled corrosive substances can lead to a toxic edema of the lungs. Pulmonary edema can be fatal.

##### **Eye contact**

Causes burns. Corrosive to the eyes and may cause severe damage including blindness. Causes serious eye damage. May cause irreversible damage to eyes.

##### **Skin contact**

May cause sensitization by skin contact. Repeated or prolonged skin contact may cause allergic reactions with susceptible persons. Corrosive. Causes severe burns. Avoid contact with skin and clothing.

##### **Ingestion**

Causes burns. Ingestion causes burns of the upper digestive and respiratory tracts. May cause severe burning pain in the mouth and stomach with vomiting and diarrhea of dark blood. Blood pressure may decrease. Brownish or yellowish stains may be seen around the mouth. Swelling of the throat may cause shortness of breath and choking. May cause lung damage if swallowed. May be fatal if swallowed and enters airways.

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### Symptoms

Redness. Burning. May cause blindness. Coughing and/ or wheezing. Itching. Rashes. Hives.

### Acute toxicity

Based on available data, the classification criteria are not met

### Mixture

No data available.

### Ingredient Acute Toxicity Data

Test data reported below.

### Oral Exposure Route

Chemical name	Endpoint type	Reported dose	Exposure time	Toxicological effects	Key literature references and sources for data
Sulfuric acid, tin(2+) salt (1:1) (<10%) CAS#: 7488-55-3	Rat LD <sub>50</sub>	2210 mg/kg	None reported	None reported	GESTIS

### Inhalation (Dust/Mist) Exposure Route

Chemical name	Endpoint type	Reported dose	Exposure time	Toxicological effects	Key literature references and sources for data
Sulfuric acid, tin(2+) salt (1:1) (<10%) CAS#: 7488-55-3	Rat LC <sub>50</sub>	2 mg/L	4 hours	None reported	ECHA

### Unknown Acute Toxicity

0% of the mixture consists of ingredient(s) of unknown toxicity.

### Acute Toxicity Estimations (ATE)

The following values are calculated based on chapter 3.1 of the GHS document

ATEmix (oral)	No information available mg/kg
ATEmix (dermal)	No information available
ATEmix (inhalation-dust/mist)	22.00 mg/l
ATEmix (inhalation-vapor)	No information available
ATEmix (inhalation-gas)	No information available

### Skin corrosion/irritation

Causes severe burns.

### Mixture

No data available.

### Ingredient Skin Corrosion/Irritation Data

Test data reported below.

Chemical name	Test method	Species	Reported dose	Exposure time	Results	Key literature references and sources for data
Sulfuric acid, tin(2+) salt (1:1) (<10%)	Existing human experience	Human	None reported	None reported	Skin irritant	RTECS

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CAS#: 7488-55-3						
Sulfuric acid (1 - 5%) CAS#: 7664-93-9	Existing human experience	Human	None reported	None reported	Corrosive to skin	HSDB

#### **Serious eye damage/irritation**

Classification based on data available for ingredients. Causes burns. Risk of serious damage to eyes.

#### **Mixture**

No data available.

#### **Ingredient Eye Damage/Eye Irritation Data**

Test data reported below.

Chemical name	Test method	Species	Reported dose	Exposure time	Results	Key literature references and sources for data
Sulfuric acid (1 - 5%) CAS#: 7664-93-9	Existing human experience	Human	None reported	None reported	Corrosive to eyes	HSDB

#### **Respiratory or skin sensitization**

May cause sensitization by skin contact.

#### **Mixture**

No data available.

#### **Ingredient Sensitization Data**

Test data reported below.

#### **Skin Sensitization Exposure Route**

Chemical name	Test method	Species	Results	Key literature references and sources for data
Sulfuric acid, tin(2+) salt (1:1) (<10%) CAS#: 7488-55-3	Patch test	Human	Confirmed to be a skin sensitizer	Vendor SDS

#### **STOT - single exposure**

Based on available data, the classification criteria are not met.

#### **Mixture**

No data available.

#### **Ingredient Specific Target Organ Toxicity Single Exposure Data**

Test data reported below.

#### **Inhalation (Vapor) Exposure Route**

Chemical name	Endpoint type	Reported dose	Exposure time	Toxicological effects	Key literature references and sources for data
Sulfuric acid (1 - 5%) CAS#: 7664-93-9	Human TD <sub>Lo</sub>	0.144 mg/L	5 minutes	Lungs, Thorax, or Respiration Dyspnea	RTECS

#### **STOT - repeated exposure**

May cause damage to organs.

#### **Mixture**

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No data available.

### Ingredient Specific Target Organ Toxicity Repeat Exposure Data

Test data reported below.

#### Oral Exposure Route

Chemical name	Endpoint type	Reported dose	Exposure time	Toxicological effects	Key literature references and sources for data
Sulfuric acid, tin(2+) salt (1:1) (<10%) CAS#: 7488-55-3	Rat NOAEL	33 mg/kg	None reported	None reported	ECHA

#### Inhalation (Vapor) Exposure Route

Chemical name	Endpoint type	Reported dose	Exposure time	Toxicological effects	Key literature references and sources for data
Sulfuric acid (1 - 5%) CAS#: 7664-93-9	Human TC <sub>Lo</sub>	0.003 mg/L	168 days	<b>Musculoskeletal</b> Changes in teeth and supporting structures	RTECS

#### Carcinogenicity

Based on available data, the classification criteria are not met.

#### Mixture

No data available.

#### Ingredient Carcinogenicity Data

No data available.

Chemical name	CAS No	ACGIH	IARC	NTP	OSHA
Sulfuric acid, tin(2+) salt (1:1)	7488-55-3	-	-	-	-
Sulfuric acid	7664-93-9	A2	Group 1	Known	X

#### Legend

<b>ACGIH (American Conference of Governmental Industrial Hygienists)</b>	A2 - Suspected Human Carcinogen
<b>IARC (International Agency for Research on Cancer)</b>	Group 1 - Carcinogenic to Humans
<b>NTP (National Toxicology Program)</b>	Known - Known Carcinogen
<b>OSHA</b>	X - Present

#### Germ cell mutagenicity

Classification based on data available for ingredients. Contains a known or suspected mutagen. The table below indicates ingredients above the cut-off threshold considered as relevant which are listed as mutagenic.

#### Mixture invitro Data

No data available.

#### Substance invitro Data

Test data reported below.

Chemical name	Test	Cell Strain	Reported dose	Exposure time	Results	Key literature references and sources for data
Sulfuric acid, tin(2+) salt (1:1) (<10%) CAS#: 7488-55-3	DNA damage	Human lymphocyte	0.005 mmol/L	None reported	Positive test result for mutagenicity	ECHA

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Sulfuric acid (1 - 5%) CAS#: 7664-93-9	Cytogenetic analysis	Hamster ovary	4 mmol/L	None reported	Positive test result for mutagenicity	No information available
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**Mixture in vivo Data**

No data available.

**Substance in vivo Data**

No data available.

**Reproductive toxicity**

Classification based on data available for ingredients. Contains a known or suspected reproductive toxin. The table below indicates ingredients above the cut-off threshold considered as relevant which are listed as reproductive toxins.

**Mixture**

No data available.

**Ingredient Reproductive Toxicity Data**

Test data reported below.

**Oral Exposure Route**

Chemical name	Endpoint type	Reported dose	Exposure time	Toxicological effects	Key literature references and sources for data
Sulfuric acid, tin(2+) salt (1:1) (<10%) CAS#: 7488-55-3	Mouse NOAEL	2 mg/kg	3 weeks	<b>Effects on Fertility</b> Post-implantation mortality (e.g. dead and/or resorbed implants per total number of implants) <b>Specific Developmental Abnormalities</b> Musculoskeletal system	ECHA

**Inhalation (Vapor) Exposure Route**

Chemical name	Endpoint type	Reported dose	Exposure time	Toxicological effects	Key literature references and sources for data
Sulfuric acid (1 - 5%) CAS#: 7664-93-9	Rabbit TC <sub>Lo</sub>	0.02 mg/L	7 hours	<b>Specific Developmental Abnormalities</b> Musculoskeletal system	No information available

**Aspiration hazard**

Based on available data, the classification criteria are not met.

**12. ECOLOGICAL INFORMATION**

**Ecotoxicity**

Toxic to aquatic life with long lasting effects.

**Unknown aquatic toxicity**

0% of the mixture consists of components(s) of unknown hazards to the aquatic environment.

**Mixture**

**Aquatic Acute Toxicity**

No data available.

**Aquatic Chronic Toxicity**

No data available.

**Substance**

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### Aquatic Acute Toxicity

Test data reported below.

#### Algae

Chemical name	Exposure time	Species	Endpoint type	Reported dose	Key literature references and sources for data
Sulfuric acid, tin(2+) salt (1:1) (<10%) CAS#: 7488-55-3	72 Hours	<i>Skeletonema costatum</i>	EC <sub>50</sub>	0.21 mg/L	ECHA

### Aquatic Chronic Toxicity

Test data reported below.

#### Fish

Chemical name	Exposure time	Species	Endpoint type	Reported dose	Key literature references and sources for data
Sulfuric acid, tin(2+) salt (1:1) (<10%) CAS#: 7488-55-3	27 days	<i>Oncorhynchus mykiss</i>	EC <sub>10</sub>	0.076 mg/L	ECHA

#### Crustacea

Chemical name	Exposure time	Species	Endpoint type	Reported dose	Key literature references and sources for data
Sulfuric acid, tin(2+) salt (1:1) (<10%) CAS#: 7488-55-3	21 days	<i>Daphnia magna</i>	NOEC	0.18 mg/L	ECHA

### Persistence and degradability

#### Mixture

No data available.

#### Bioaccumulation

MATERIAL DOES NOT BIOACCUMULATE

#### Mixture

No data available.

#### Partition coefficient

Not applicable

#### Mobility

#### Soil Organic Carbon-Water Partition Coefficient

Not applicable

#### Other adverse effects

No information available

## 13. DISPOSAL CONSIDERATIONS

### Waste treatment methods

#### Waste from residues/unused products

Dispose of in accordance with local regulations. Dispose of waste in accordance with environmental legislation.

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**Contaminated packaging** Do not reuse empty containers.

**US EPA Waste Number** D002

**Special instructions for disposal** Work in an approved fume hood. Dilute material with excess water making a weaker than 5% solution. Adjust to a pH between 6 and 9 with an alkali, such as soda ash or sodium bicarbonate. If permitted by regulation. Open cold water tap completely, slowly pour the reacted material to the drain. Allow cold water to run for 5 minutes to completely flush the system. Check with local municipal and state authorities and waste contractors for pertinent local information regarding the proper disposal of chemicals.

## 14. TRANSPORT INFORMATION

### DOT

**UN/ID no** UN3264  
**Proper shipping name** CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S.  
**DOT Technical Name** Sulfuric acid  
**Transport hazard class(es)** 8  
**Packing Group** III  
**Emergency Response Guide Number** 154

### TDG

**UN/ID no** UN3264  
**Proper shipping name** CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S.  
**TDG Technical Name** Sulfuric acid  
**Transport hazard class(es)** 8  
**Packing Group** III

### IATA

**UN number or ID number** UN3264  
**Proper shipping name** Corrosive liquid, acidic, inorganic, n.o.s.  
**IATA Technical Name** Sulfuric acid  
**Transport hazard class(es)** 8  
**Packing group** III  
**ERG Code** 8L  
**Special Provisions** A158, A179, A97  
**Description** UN3264, Corrosive liquid, acidic, inorganic, n.o.s. (Sulfuric acid), 8, III

### IMDG

**UN number or ID number** UN3264  
**Proper shipping name** CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S.  
**IMDG Technical Name** Sulfuric acid  
**Transport hazard class(es)** 8  
**Packing Group** III  
**EmS-No** F-A, S-B  
**Special Provisions** 223, 274  
**Marine pollutant** This material meets the definition of a marine pollutant  
**Description** UN3264, CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S. (Sulfuric acid, Sulfuric acid, tin(2+) salt (1:1)), 8, III, Marine pollutant

**Note:** No special precautions necessary.

### **Additional information**

There is a possibility that this product could be contained in a reagent set or kit composed of various compatible dangerous goods.

If the item is not in a reagent set or kit, the classification given above applies.

If the item is part of a reagent set or kit the classification would change to the following:

UN3316 Chemical Kit, Hazard Class 9, Packing Group II or III.



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If the item is not regulated, the Chemical Kit classification does not apply.

### 15. REGULATORY INFORMATION

#### National Inventories

TSCA Complies  
DSL/NDSL Complies

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory  
DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List

#### International Inventories

EINECS/ELINCS Complies  
ENCS Complies  
IECSC Complies  
KECL Complies  
PICCS Complies  
TCSI Complies  
AICS Complies  
NZIoC Complies

EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances  
ENCS - Japan Existing and New Chemical Substances  
IECSC - China Inventory of Existing Chemical Substances  
KECL - Korean Existing and Evaluated Chemical Substances  
PICCS - Philippines Inventory of Chemicals and Chemical Substances  
TCSI - Taiwan Chemical Substances Inventory  
AICS - Australian Inventory of Chemical Substances  
NZIoC - New Zealand Inventory of Chemicals

#### US Federal Regulations

##### SARA 313

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

Chemical name	SARA 313 - Threshold Values %
Sulfuric acid (CAS #: 7664-93-9)	1.0

##### SARA 311/312 Hazard Categories

Acute health hazard Yes  
Chronic Health Hazard Yes  
Fire hazard No  
Sudden release of pressure hazard No  
Reactive Hazard No

##### CWA (Clean Water Act)

This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42)

Chemical name	CWA - Reportable Quantities	CWA - Toxic Pollutants	CWA - Priority Pollutants	CWA - Hazardous Substances
Sulfuric acid 7664-93-9	1000 lb	-	-	X

##### CERCLA

This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material

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Chemical name	Hazardous Substances RQs	CERCLA/SARA RQ	Reportable Quantity (RQ)
Sulfuric acid 7664-93-9	1000 lb	1000 lb	RQ 1000 lb final RQ RQ 454 kg final RQ

**U.S. - DEA (Drug Enforcement Administration) List I & List II**

Chemical name	U.S. - DEA (Drug Enforcement Administration) - List I or Precursor Chemicals	U.S. - DEA (Drug Enforcement Administration) - List II or Essential Chemicals
Sulfuric acid (1 - 5%) CAS#: 7664-93-9	Not Listed	50 gallon Export Volume (exports, transshipments and international transactions to designated countries given in 1310.08(b))

**US State Regulations**

**California Proposition 65**

This product contains the following Proposition 65 chemicals

Chemical name	California Proposition 65
Sulfuric acid (CAS #: 7664-93-9)	Carcinogen



**WARNING:** This product can expose you to chemicals including Sulfuric acid, which is known to the State of California to cause cancer.

For more information, go to <http://www.P65Warnings.ca.gov>

**U.S. State Right-to-Know Regulations**

This product may contain substances regulated by state right-to-know regulations.

Chemical name	New Jersey	Massachusetts	Pennsylvania
Sulfuric acid, tin(2+) salt (1:1) 7488-55-3	-	X	-
Sulfuric acid 7664-93-9	X	X	X

**U.S. EPA Label Information**

Chemical name	FIFRA	FDA
Sulfuric acid	180.0910	21 CFR 184.1095

**16. OTHER INFORMATION, INCLUDING DATE OF PREPARATION OF THE LAST REVISION**

**Special Comments**

None

**Additional information**

**Global Automotive Declarable Substance List (GADSL)**

Not applicable

**NFPA and HMIS Classifications**

NFPA	Health hazards - 3	Flammability - 0	Instability - 0	Physical and chemical properties -
HMIS	Health hazards - 3			

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	- *	Flammability - 0	Physical hazards - 0	Personal protection - X - I
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**Key or legend to abbreviations and acronyms used in the safety data sheet**

ACGIH	ACGIH (American Conference of Governmental Industrial Hygienists)
ATSDR	ATSDR (Agency for Toxic Substances and Disease Registry)
CCRIS	CCRIS (Chemical Carcinogenesis Research Information System)
CDC	CDC (Center for Disease Control)
CEPA	CEPA (Canadian Environmental Protection Agency)
CICAD	CICAD (Concise International Chemical Assessment Documents)
ECHA	ECHA (The European Chemicals Agency)
EEA	EEA (European Environment Agency)
EPA	EPA (Environmental Protection Agency)
ERMA	ERMA (New Zealands Environmental Risk Management Authority)
ECOSARS	Estimation through ECOSARS v1.11 part of the Estimation Programs Interface (EPI) Suite™
FDA	FDA (Food & Drug Administration)
GESTIS	GESTIS (Information System on Hazardous Substances of the German Social Accident Insurance)
HSDB	HSDB (Hazardous Substances Data Bank)
INERIS	INERIS (The National Industrial Environment and Risks Institute)
IPCS INCHEM	IPCS INCHEM (International Programme on Chemical Safety)
IUCLID	IUCLID (The International Uniform Chemical Information Database)
NITE	Japan National Institute of Technology and Evaluation (NITE)
NIH	NIH (National Institutes of Health)
NIOSH	NIOSH (National Institute for Occupational Safety and Health)
LOLI	LOLI (List of Lists - An International Chemical Regulatory Database)
NDF	no data
NICNAS	Australia National Industrial Chemicals Notification and Assessment Scheme (NICNAS)
NIOSH IDLH	Immediately Dangerous to Life or Health
OSHA	OSHA (Occupational Safety and Health Administration of the US Department of Labor)
PEEN	PEEN (Pan European Ecological Network)
RTECS	RTECS (Registry of Toxic Effects of Chemical Substances)
SIDS	SIDS (Screening Information Dataset) for High Volume Chemicals
SYKE	The Finnish Environment Institute (SYKE)
USDA	USDA (United States Department of Agriculture)
USDC	USDC (United States Department of Commerce)
WHO	WHO (World Health Organization)

**Legend - Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION**

TWA	TWA (time-weighted average)	STEL	STEL (Short Term Exposure Limit)
MAC	Maximum Allowable Concentration	Ceiling	Ceiling Limit Value
X	Listed	Vacated	These values have no official status. The only binding levels of contaminants are those listed in the final OSHA PEL. These lists are for reference purposes only. Please note that some reference state regulations of these "liberated" exposure limits in their state regulations.
SKN*	Skin designation	SKN+	Skin sensitization
RSP+	Respiratory sensitization	**	Hazard Designation
C	Carcinogen	R	Reproductive toxicant
M	mutagen		

Prepared By Hach Product Compliance Department

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**Revision Note** None

**Disclaimer**

**USER RESPONSIBILITY:** Each user should read and understand this information and incorporate it in individual site safety programs in accordance with applicable hazard communication standards and regulations.

**THE INFORMATION CONTAINED HEREIN IS BASED ON DATA CONSIDERED TO BE ACCURATE. HOWEVER, NO WARRANTY IS EXPRESSED OR IMPLIED REGARDING THE ACCURACY OF THESE DATA OR THE RESULTS TO BE OBTAINED FROM THE USE THEREOF.**

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**End of Safety Data Sheet**