SAFETY DATA SHEET

1. IDENTIFICATION

Product identifier
Product Name Copper Sulfate - Sulfamic Acid Inhibitor Solution

Other means of identification
Product Code(s) 35732

Safety data sheet number M00637

UN/ID no UN3265

Recommended use of the chemical and restrictions on use
Recommended Use Determination of dissolved oxygen. 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 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
P363 - Wash contaminated clothing before reuse
P304 + P340 - IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing
P405 - Store locked up
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
P273 - Avoid release to the environment
P391 - Collect spillage
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
None

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 #
Sulfuric acid, copper(2+) salt (1:1)	7758-98-7	1 - 5%	-
Sulfamic acid	5329-14-6	1 - 5%	-
Acetic acid	64-19-7	1 - 5%	-

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.
Skin contact	Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. Get immediate medical advice/attention.
Ingestion	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.
Self-protection of the first aider	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

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	The product causes burns of eyes, skin and mucous membranes. Thermal decomposition can lead to release of irritating gases and vapors.
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. 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 Pick up and transfer to properly labeled containers.

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

Chemical name	ACGIH TLV	OSHA PEL	NIOSH
Sulfuric acid, copper(2+) salt (1:1) CAS#: 7758-98-7	TWA: 1 mg/m³ Cu dust and mist	NDF	IDLH: 100 mg/m³ Cu dust and mist TWA: 1 mg/m³ Cu dust and mist
Acetic acid	STEL: 15 ppm	TWA: 10 ppm	IDLH: 50 ppm

CAS#: 64-19-7	TWA: 10 ppm	TWA: 25 mg/m³ (vacated) TWA: 10 ppm (vacated) TWA: 25 mg/m³	TWA: 10 ppm TWA: 25 mg/m³ STEL: 15 ppm STEL: 37 mg/m³

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.

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

Physical state Liquid
Appearance aqueous solution
Color blue
Odor Odorless
Odor threshold No data available

Property	Values	Remarks • Method
Molecular weight	No data available	
pH	0.8	@ 20 °C
Melting point/freezing point	~ -4 °C / 24.8 °F	
Boiling point / boiling range	~ 101 °C / 213.8 °F	
Evaporation rate	0.63 (water = 1)	
Vapor pressure	17.177 mm Hg / 2.29 kPa at 20 °C / 68 °F	
Relative vapor density	0.63	
Specific gravity (water = 1 / air = 1)	1.065	

Partition Coefficient (n-octanol/water) Not applicable

Soil Organic Carbon-Water Partition Coefficient Not applicable

Autoignition temperature No data available

Decomposition temperature No data available

Dynamic viscosity No data available

Kinematic viscosity No data available

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
Methanol	Soluble	> 1000 mg/L	25 °C / 77 °F

Other information

Metal Corrosivity

Steel Corrosion Rate 200.91 mm/yr / 7.91 in/yr
Aluminum Corrosion Rate 11.23 mm/yr / 0.44 in/yr

Volatile Organic Compounds (VOC) Content
See ingredients information below

Chemical name	CAS No	Volatile organic compounds (VOC) content	CAA (Clean Air Act)
Sulfuric acid, copper(2+) salt (1:1)	7758-98-7	No data available	-
Sulfamic acid	5329-14-6	Not applicable	-
Acetic acid	64-19-7	No data available	X

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

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 irritation.
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

Product Acute Toxicity Data

No data available.

Ingredient Acute Toxicity Data
No data available.

Chemical name	Endpoint type	Reported dose	Exposure time	Toxicological effects	Key literature references and sources for data
Sulfuric acid, copper(2+) salt (1:1) (1 - 5%) CAS#: 7758-98-7	Rat LD_{50}	300 mg/kg	None reported	None reported	LOLI
Sulfamic acid (1 - 5%) CAS#: 5329-14-6	Rat LD_{50}	1450 mg/kg	None reported	None reported	IUCLID (The International Uniform Chemical Information Database)
Acetic acid (1 - 5%) CAS#: 64-19-7	Rat LD_{50}	3310 mg/kg	None reported	None reported	Vendor SDS
Chemical name	**Endpoint type**	**Reported dose**	**Exposure time**	**Toxicological effects**	**Key literature references and sources for data**
Sulfuric acid, copper(2+) salt (1:1) (1 - 5%) CAS#: 7758-98-7	Rabbit LD_{50}	> 2000 mg/kg	None reported	None reported	ECHA (The European Chemicals Agency)

Unknown Acute Toxicity
0.01% 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)	5,421.00 mg/kg
ATEmix (dermal)	21,322.00 mg/kg
ATEmix (inhalation-dust/mist)	No information available
ATEmix (inhalation-vapor)	No information available
ATEmix (inhalation-gas)	No information available

Skin corrosion/irritation
May cause skin irritation.

Product Skin Corrosion/Irritation Data
No data available.

Ingredient Skin Corrosion/Irritation Data
No data available.

Chemical name	Test method	Species	Reported dose	Exposure time	Results	Key literature references and sources for data
Sulfuric acid, copper(2+) salt (1:1) (1 - 5%) CAS#: 7758-98-7	Standard Draize Test	Rabbit	500 mg	4 hours	Skin irritant	ECHA (The European Chemicals Agency)
Sulfamic acid (1 - 5%) CAS#: 5329-14-6	Standard Draize Test	Human	40 mg	5 days	Mild skin irritant	RTECS (Registry of Toxic Effects of Chemical Substances)
Acetic acid (1 - 5%) CAS#: 64-19-7	Standard Draize Test	Rabbit	0.050 mg	None reported	Corrosive to skin	HSDB (Hazardous Substances Data Bank)

Serious eye damage/irritation

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

Product Serious Eye Damage/Eye Irritation Data
No data available.

Ingredient Eye Damage/Eye Irritation Data
No data available.

Chemical name	Test method	Species	Reported dose	Exposure time	Results	Key literature references and sources for data
Sulfamic acid (1 - 5%) CAS#: 5329-14-6	Standard Draize Test	Rabbit	20 mg	None reported	Eye irritant	RTECS (Registry of Toxic Effects of Chemical Substances)

Respiratory or skin sensitization
Based on available data, the classification criteria are not met.

Product Sensitization Data
No data available.

Ingredient Sensitization Data
No data available.

STOT - single exposure
Based on available data, the classification criteria are not met.

Product Specific Target Organ Toxicity Single Exposure Data
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.

Product Specific Target Organ Toxicity Repeat Dose Data
No data available.

Ingredient Specific Target Organ Toxicity Repeat Exposure Data
No data available.

Chemical name	Endpoint type	Reported dose	Exposure time	Toxicological effects	Key literature references and sources for data
Sulfamic acid (1 - 5%) CAS#: 5329-14-6	Rat NOAEL	1000 mg/kg	90 days	No toxicological effects observed	ECHA (The European Chemicals Agency)

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

Product Carcinogenicity Data
No data available.

Ingredient Carcinogenicity Data
No data available.

Chemical name	CAS No	ACGIH	IARC	NTP	OSHA
Sulfuric acid, copper(2+) salt (1:1)	7758-98-7	-	-	-	-
Sulfamic acid	5329-14-6	-	-	-	-
Acetic acid	64-19-7	-	-	-	-

Legend

ACGIH (American Conference of Governmental Industrial Hygienists)	Does not apply
IARC (International Agency for Research on Cancer)	Does not apply
NTP (National Toxicology Program)	Does not apply
OSHA (Occupational Safety and Health Administration of the US Department of Labor)	Does not apply

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

Product Germ Cell Mutagenicity *invitro* **Data**
No data available.

Ingredient Germ Cell Mutagenicity *invitro* **Data**
No data available.

Chemical name	Test	Cell Strain	Reported dose	Exposure time	Results	Key literature references and sources for data
Sulfuric acid, copper(2+) salt (1:1) (1 - 5%) CAS#: 7758-98-7	DNA inhibition	Human lymphocyte	0.076 mmol/L	None reported	Positive test result for mutagenicity	RTECS (Registry of Toxic Effects of Chemical Substances)

Product Germ Cell Mutagenicity *invivo* **Data**
No data available.

Ingredient Germ Cell Mutagenicity *invivo* **Data**
No data available.

Chemical name	Test	Species	Reported dose	Exposure time	Results	Key literature references and sources for data
Sulfamic acid (1 - 5%) CAS#: 5329-14-6	Micronucleus test	Mouse	None reported	None reported	Negative test result for mutagenicity	Japan National Institute of Technology and Evaluation (NITE)

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

Product Reproductive Toxicity Data
No data available.

Ingredient Reproductive Toxicity Data
No data available.

Chemical name	Endpoint type	Reported dose	Exposure time	Toxicological effects	Key literature references and sources for data
Sulfamic acid (1 - 5%) CAS#: 5329-14-6	Rat NOAEL	200 mg/kg	None reported	No reproductive or developmental toxic effects observed	ECHA (The European Chemicals Agency)

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

12. ECOLOGICAL INFORMATION

This product contains a chemical which is listed as a severe marine pollutant according to DOT.

Ecotoxicity Very toxic to aquatic life with long lasting effects.

Unknown aquatic toxicity 0.01 % of the mixture consists of component(s) of unknown hazards to the aquatic environment.

Product Ecological Data

Aquatic Acute Toxicity
No data available.

Aquatic Chronic Toxicity
No data available.

Ingredient Ecological Data

Aquatic Acute Toxicity
No data available.

Chemical name	Exposure time	Species	Endpoint type	Reported dose	Key literature references and sources for data
Sulfuric acid, copper(2+) salt (1:1) (1 - 5%) CAS#: 7758-98-7	96 hours	*Pimephales promelas*	LC_{50}	0.0028 mg/L	Vendor SDS
Sulfamic acid (1 - 5%) CAS#: 5329-14-6	96 hours	*Pimephales promelas*	LC_{50}	42.2 mg/L	ERMA (New Zealands Environmental Risk Management Authority)
Acetic acid (1 - 5%) CAS#: 64-19-7	96 hours	*Pimephales promelas*	LC_{50}	79 mg/L	GESTIS (Information System on Hazardous Substances of the German Social Accident Insurance)
Chemical name	**Exposure time**	**Species**	**Endpoint type**	**Reported dose**	**Key literature references and sources for data**
Sulfuric acid, copper(2+) salt (1:1) (1 - 5%) CAS#: 7758-98-7	48 Hours	*Daphnia magna*	EC_{50}	0.0014 mg/L	Vendor SDS
Sulfamic acid (1 - 5%) CAS#: 5329-14-6	48 Hours	*Daphina magna*	EC_{50}	71.6 mg/L	ECHA (The European Chemicals Agency)
Acetic acid (1 - 5%) CAS#: 64-19-7	48 Hours	None reported	LC_{50}	90.1 mg/L	GESTIS (Information System on Hazardous Substances of the German Social Accident Insurance)
Chemical name	**Exposure time**	**Species**	**Endpoint type**	**Reported dose**	**Key literature references and sources for data**
Sulfuric acid, copper(2+) salt (1:1) (1 - 5%) CAS#: 7758-98-7	72 Hours	*Thalassiosira pseudonana*	EC_{50}	0.005 mg/L	ERMA (New Zealands Environmental Risk Management Authority)
Sulfamic acid (1 - 5%) CAS#: 5329-14-6	72 Hours	*Selenastrum capricornutum*	EC_{50}	48 mg/L	ECHA (The European Chemicals Agency)

Aquatic Chronic Toxicity
No data available.

Persistence and degradability

Product Biodegradability Data
No data available.

Bioaccumulation
MATERIAL DOES NOT BIOACCUMULATE
Product Bioaccumulation Data
No data available.

Partition Coefficient (n-octanol/water) 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 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	UN3265
Proper shipping name	Corrosive liquid, acidic, organic, n.o.s
DOT Technical Name	(Acetic Acid/Sulphamic Acid Solution)
Transport hazard class(es)	8
Packing Group	II
Marine pollutant	This product contains a chemical which is listed as a severe marine pollutant according to DOT.
Emergency Response Guide Number	153

TDG

UN/ID no	UN3265
Proper shipping name	Corrosive liquid, acidic, organic, n.o.s
TDG Technical Name	(Acetic Acid/Sulphamic Acid Solution)
Transport hazard class(es)	8
Packing Group	II
Marine pollutant	This product contains a chemical which is listed as a severe marine pollutant according to TDG.

IATA

UN number or ID number	UN3265
Proper shipping name	Corrosive liquid, acidic, organic, n.o.s
IATA Technical Name	(Acetic Acid/Sulphamic Acid Solution)

Transport hazard class(es)	8
Packing group	II
ERG Code	153

IMDG

UN number or ID number	UN3265
IMDG Technical Name	(Acetic Acid/Sulphamic Acid Solution)
Transport hazard class(es)	8
Packing Group	II
Marine pollutant	This material meets the definition of a 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 - Existing substances	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, copper(2+) salt (1:1) (CAS #: 7758-98-7)	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, copper(2+) salt (1:1) 7758-98-7	10 lb	X	-	X
Acetic acid 64-19-7	5000 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, copper(2+) salt (1:1) 7758-98-7	10 lb	-	RQ 10 lb final RQ RQ 4.54 kg final RQ
Acetic acid 64-19-7	5000 lb	-	RQ 5000 lb final RQ RQ 2270 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 does not contain any substances regulated by state right-to-know regulations.

Chemical name	New Jersey	Massachusetts	Pennsylvania
Sulfuric acid, copper(2+) salt (1:1) 7758-98-7	X	X	X
Sulfamic acid 5329-14-6	X	-	-
Acetic acid 64-19-7	X	X	X

U.S. EPA Label Information

Chemical name	FIFRA	FDA
Sulfuric acid, copper(2+) salt (1:1)	-	21 CFR 184.1261
Sulfamic acid	-	21 CFR 186.1093
Acetic acid	180.0551	21 CFR 184.1005

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
Sulfuric acid, copper(2+) salt (1:1) 7758-98-7	Declarable Substance (LR) Prohibited Substance (LR)	0 %

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

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

NIOSH IDLH	*Immediately Dangerous to Life or Health*
ACGIH	ACGIH (American Conference of Governmental Industrial Hygienists)
NDF	*no data*

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	10-Aug-2021
Revision Date	27-Apr-2022
Revision Note	SDS sections updated 2

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.

End of Safety Data Sheet