



Be Right™

SAFETY DATA SHEET

Issue Date 22-Nov-2019

Revision Date
22-Nov-2019

Version 5.3

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1. IDENTIFICATION

Product identifier

Product Name FerroZine® Iron Reagent

Other means of identification

Product Code(s) 230149

Safety data sheet number M00186

UN/ID no UN2922

Recommended use of the chemical and restrictions on use

Recommended Use Indicator for iron.
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)

Acute toxicity - Oral	Category 3
Acute toxicity - Inhalation (Vapors)	Category 4
Acute toxicity - Inhalation (Dusts/Mists)	Category 4
Skin corrosion/irritation	Category 1 Sub-category B
Serious eye damage/eye irritation	Category 1
Respiratory sensitization	Category 1
Skin sensitization	Category 1
Chronic aquatic toxicity	Category 3

Hazards not otherwise classified (HNOC)

Not applicable

Label elements

Signal word

Danger



Hazard statements

- H301 - Toxic if swallowed
- H314 - Causes severe skin burns and eye damage
- H317 - May cause an allergic skin reaction
- H332 - Harmful if inhaled
- H334 - May cause allergy or asthma symptoms or breathing difficulties if inhaled
- H412 - Harmful to aquatic life with long lasting effects

Precautionary statements

- 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
- P260 - Do not breathe dust/fume/gas/mist/vapors/spray
- P280 - Wear protective gloves/protective clothing/eye protection/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
- 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
- P285 - In case of inadequate ventilation wear respiratory protection
- P304 + P341 - IF INHALED: If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing
- P342 + P311 - If experiencing respiratory symptoms: Call a POISON CENTER or doctor/physician
- P272 - Contaminated work clothing should not be allowed out of the workplace
- P273 - Avoid release to the environment
- P270 - Do not eat, drink or smoke when using this product
- P301 + P310 - IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician

Other Hazards Known

- May be harmful in contact with skin
- Harmful to aquatic life

3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance
Not applicable

Mixture

Chemical Family Mixture.
Chemical nature Mixture of organic compounds.

Percent ranges are used where confidential product information is applicable.

Chemical name	CAS No.	Percent Range	HMRIC #
Acetic acid, mercapto-, monoammonium salt	5421-46-5	40 - 50%	-
Thioglycolic acid	68-11-1	20 - 30%	-

Benzenesulfonic acid, 4,4-[3-(2-pyridinyl)-1,2,4-triazine-5,6-diyl]bis-, monosodium salt	69898-45-9	<1%	-
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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. May cause allergic respiratory reaction. Avoid direct contact with skin. Use barrier to give mouth-to-mouth resuscitation.
Eye contact	Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Keep eye wide open while rinsing. Do not rub affected area. Remove contact lenses, if present and easy to do. Continue rinsing. 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. May cause an allergic skin reaction.
Ingestion	Do NOT induce vomiting. Clean mouth with water and drink afterwards plenty of water. Never give anything by mouth to an unconscious person. Get immediate medical advice/attention. May produce an allergic reaction.
Self-protection of the first aider	Ensure that medical personnel are aware of the material(s) involved, take precautions to protect themselves and prevent spread of contamination. Avoid contact with skin, eyes or clothing. Avoid direct contact with skin. Use barrier to give mouth-to-mouth resuscitation. Avoid breathing vapors or mists.

Most important symptoms and effects, both acute and delayed

Symptoms	Burning sensation. May cause allergy or asthma symptoms or breathing difficulties if inhaled. Coughing and/ or wheezing. Itching. Rashes. Hives. Difficulty in breathing.
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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. May cause sensitization in susceptible persons. Treat symptomatically.
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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. Product is or contains a sensitizer. May cause sensitization by inhalation and skin contact. May cause sensitization by skin contact.

Hazardous combustion products	Carbon monoxide, Carbon dioxide. Nitrogen oxides. Sulfur oxides. Ammonia.
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.
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Personal precautions, protective equipment and emergency procedures

Personal precautions	Attention! Corrosive material. Avoid contact with skin, eyes or clothing. Ensure adequate ventilation. Use personal protective equipment as required. Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak. Avoid breathing vapors or mists.
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.
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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. Provide extract ventilation to points where emissions occur. Remove contaminated clothing and shoes. Avoid breathing vapors or mists.
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Conditions for safe storage, including any incompatibilities

Storage Conditions	Keep containers tightly closed in a dry, cool and well-ventilated place. Keep out of the reach of children. Protect from moisture. Store locked up. 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
Acetic acid, mercapto-, monoammonium salt CAS#: 5421-46-5	TWA: 1 ppm S*	NDF	NDF
Thioglycolic acid CAS#: 68-11-1	TWA: 1 ppm S*	(vacated) TWA: 1 ppm (vacated) TWA: 4 mg/m ³ (vacated) SKN*	TWA: 1 ppm TWA: 4 mg/m ³

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.

Eye/face protection

Face protection shield.

Skin and body protection

Wear suitable protective clothing. Long sleeved clothing. Chemical resistant apron.

General Hygiene Considerations

Avoid contact with skin, eyes or clothing. Wear suitable gloves and eye/face protection. Do not eat, drink or smoke when using this product. 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.

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 yellow
 Odor Strong, skunk-like Odor threshold No data available

<u>Property</u>	<u>Values</u>	<u>Remarks • Method</u>
Molecular weight	Not applicable	
pH	3.5	
Melting point/freezing point	~ -9 °C / 15.8 °F	
Boiling point / boiling range	~ 102 °C / 215.6 °F	
Evaporation rate	0.21 (water = 1)	
Vapor pressure	2.325 mm Hg / 0.31 kPa at 20 °C / 68 °F	

Vapor density (air = 1)	0.62 (Air = 1)
Specific gravity (water = 1 / air = 1)	1.310
Partition Coefficient (n-octanol/water)	No data available
Soil Organic Carbon-Water Partition Coefficient	No data available
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

Other Information

Metal Corrosivity

Steel Corrosion Rate	0.56 mm/yr / 0.02 in/yr
Aluminum Corrosion Rate	0.1 mm/yr / 0 in/yr

Volatile Organic Compounds (VOC) Content
 See ingredients information below

Chemical name	CAS No.	Volatile organic compounds (VOC) content	CAA (Clean Air Act)
Acetic acid, mercapto-, monoammonium salt	5421-46-5	Not applicable	-
Thioglycolic acid	68-11-1	No data available	-
Benzenesulfonic acid, 4,4-[3-(2-pyridinyl)-1,2,4-triazine-5,6-diyl]bis-, monosodium salt	69898-45-9	Not applicable	-

Explosive properties

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

Flammable properties

Flash point	No data available
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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	Not applicable

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
Exposure to air or moisture over prolonged periods. Excessive heat.

Incompatible materials
Acids. Bases. Oxidizing agent.

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. May cause sensitization in susceptible persons. Harmful by inhalation.
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	Repeated or prolonged skin contact may cause allergic reactions with susceptible persons. May cause sensitization by 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. May cause additional effects as listed under "Inhalation".

Symptoms

Redness. Burning. May cause blindness. Coughing and/ or wheezing. Symptoms of allergic reaction may include rash, itching, swelling, trouble breathing, tingling of the hands and feet, dizziness, lightheadedness, chest pain, muscle pain, or flushing. Itching. Rashes. Hives.

Acute toxicity

Toxic if swallowed
 Harmful if inhaled

Product Acute Toxicity Data

Test data reported below.

Oral Exposure Route

Endpoint type	Reported dose	Exposure time	Toxicological effects
Rat	190 mg/kg	Single generation	Abnormalities of the lungs Abnormalities of the liver Abnormalities of the kidneys Abnormalities of the spleen Abnormalities of the gastrointestinal tract

Inhalation (Gas) Exposure Route

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
Acetic acid, mercapto-, monoammonium salt (40 - 50%) CAS#: 5421-46-5	Rat LD ₅₀	3500 mg/kg	None reported	None reported	RTECS (Registry of Toxic Effects of Chemical Substances)
Thioglycolic acid (20 - 30%) CAS#: 68-11-1	Rat LD ₅₀	73 mg/kg	None reported	None reported	RTECS (Registry of Toxic Effects of Chemical Substances)

Dermal Exposure Route

Chemical name	Endpoint type	Reported dose	Exposure time	Toxicological effects	Key literature references and sources for data
Thioglycolic acid (20 - 30%) CAS#: 68-11-1	Rat LD ₅₀	848 mg/kg	None reported	None reported	RTECS (Registry of Toxic Effects of Chemical Substances)

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
ATEmix (dermal)	2,868.70 mg/kg
ATEmix (inhalation-dust/mist)	1.70 mg/L

ATEmix (inhalation-vapor)	10.10 mg/L
ATEmix (inhalation-gas)	No information available

Skin corrosion/irritation

Causes severe burns.

Product Skin Corrosion/Irritation Data

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
Acetic acid, mercapto-, monoammonium salt (40 - 50%) CAS#: 5421-46-5	Existing human experience	Human	None reported	None reported	Skin irritant	HSDB (Hazardous Substances Data Bank)
Thioglycolic acid (20 - 30%) CAS#: 68-11-1	EpiDerm Skin Model (Directive 2000/33/EC, B.27)	synthetic bio-barrier membrane	990 mg	3 minutes	Corrosive to skin	ECHA (The European Chemicals Agency)
Benzenesulfonic acid, 4,4-[3-(2-pyridinyl)-1,2,4-triazine-5,6-diyl]bis-, monosodium salt (<1%) CAS#: 69898-45-9	QSAR (Quantitative Structure Activity Relationship Models)	None reported	None reported	None reported	Not corrosive or irritating to skin	Toxtree (Ideaconult, Ltd)

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

Test data reported below.

Chemical name	Test method	Species	Reported dose	Exposure time	Results	Key literature references and sources for data
Benzenesulfonic acid, 4,4-[3-(2-pyridinyl)-1,2,4-triazine-5,6-diyl]bis-, monosodium salt (<1%) CAS#: 69898-45-9	QSAR (Quantitative Structure Activity Relationship Models)	None reported	None reported	None reported	Not corrosive or irritating to eyes	Toxtree (Ideaconult, Ltd)

Respiratory or skin sensitization

May cause sensitization by inhalation. May cause sensitization by skin contact.

Product Sensitization Data

No data available.

Ingredient Sensitization Data

Test data reported below.

Respiratory Sensitization Exposure Route

Chemical name	Test method	Species	Results	Key literature references and sources for data
Acetic acid, mercapto-, monoammonium salt (40 - 50%) CAS#: 5421-46-5	Based on human experience	None reported	Confirmed to be a respiratory sensitizer	HSDB (Hazardous Substances Data Bank)

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.

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
Acetic acid, mercapto-, monoammonium salt	5421-46-5	-	-	-	-
Thioglycolic acid	68-11-1	-	-	-	-
Benzenesulfonic acid, 4,4-[3-(2-pyridinyl)-1,2,4-triazine-5,6-diyl]bis-, monosodium salt	69898-45-9	-	-	-	-

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

Chemical name	Endpoint type	Reported dose	Exposure time	Toxicological effects	Key literature references and sources for data
Benzenesulfonic acid, 4,4-[3-(2-pyridinyl)-1,2,4-triazine-5,6-diyl]bi	QSAR (Quantitative Structure Activity	None reported	None reported	Not Carcinogenic	Toxtree (Ideaconult, Ltd)

s-, monosodium salt (<1%) CAS#: 69898-45-9	Relationship Models)				
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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

Test data reported below.

Chemical name	Test	Cell Strain	Reported dose	Exposure time	Results	Key literature references and sources for data
Thioglycolic acid (20 - 30%) CAS#: 68-11-1	Mutation in microorganisms	<i>Salmonella typhimurium</i>	None reported	None reported	Negative test result for mutagenicity	IUCLID (The International Uniform Chemical Information Database)

Product Germ Cell Mutagenicity *invivo* Data

No data available.

Ingredient Germ Cell Mutagenicity *invivo* Data

No data available.

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.

Aspiration hazard

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

12. ECOLOGICAL INFORMATION

Ecotoxicity

Harmful 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.

Product Ecological Data

Aquatic Acute Toxicity

No data available.

Aquatic Chronic Toxicity

No data available.

Ingredient Ecological Data

Aquatic Acute Toxicity

Test data reported below.

Fish

Chemical name	Exposure time	Species	Endpoint type	Reported dose	Key literature references and sources for data
Acetic acid, mercapto-, monoammonium salt (40 - 50%) CAS#: 5421-46-5	96 hours	None reported	LC ₅₀	8596 mg/L	Estimation through ECOSARS v1.11 part of the Estimation Programs Interface (EPI) Suite™
Thioglycolic acid (20 - 30%) CAS#: 68-11-1	96 hours	<i>Pimephales promelas</i>	LC ₅₀	30 mg/L	IUCLID (The International Uniform Chemical Information Database)
Benzenesulfonic acid, 4,4-[3-(2-pyridinyl)-1,2,4-triazine-5,6-diy]bis-, monosodium salt (<1%) CAS#: 69898-45-9	96 hours	None reported	LC ₅₀	22900 mg/L	Estimation through ECOSARS v1.11 part of the Estimation Programs Interface (EPI) Suite™

Crustacea

Chemical name	Exposure time	Species	Endpoint type	Reported dose	Key literature references and sources for data
Acetic acid, mercapto-, monoammonium salt (40 - 50%) CAS#: 5421-46-5	48 Hours	None reported	EC ₅₀	41 mg/L	Estimation through ECOSARS v1.11 part of the Estimation Programs Interface (EPI) Suite™
Benzenesulfonic acid, 4,4-[3-(2-pyridinyl)-1,2,4-triazine-5,6-diy]bis-, monosodium salt (<1%) CAS#: 69898-45-9	48 Hours	None reported	EC ₅₀	97900 mg/L	Estimation through ECOSARS v1.11 part of the Estimation Programs Interface (EPI) Suite™

Algae

Chemical name	Exposure time	Species	Endpoint type	Reported dose	Key literature references and sources for data
Acetic acid, mercapto-, monoammonium salt (40 - 50%) CAS#: 5421-46-5	96 hours	None reported	EC ₅₀	19 mg/L	Estimation through ECOSARS v1.11 part of the Estimation Programs Interface (EPI) Suite™
Benzenesulfonic acid, 4,4-[3-(2-pyridinyl)-1,2,4-triazine-5,6-diy]bis-, monosodium salt (<1%) CAS#: 69898-45-9	96 hours	None reported	EC ₅₀	22400 mg/L	Estimation through ECOSARS v1.11 part of the Estimation Programs Interface (EPI) Suite™

Aquatic Chronic Toxicity
 No data available.

Persistence and degradability

Product Biodegradability Data

Product Code(s) 230149
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No data available.

Bioaccumulation

Product Bioaccumulation Data
No data available.

Partition Coefficient (n-octanol/water) No data available

Mobility

Soil Organic Carbon-Water Partition Coefficient No data available

Other adverse effects

No information available.

Endocrine Disruptor Information

Chemical name	EU - Endocrine Disruptors Candidate List	EU - Endocrine Disruptors - Evaluated Substances	Endocrine disrupting potential
Benzenesulfonic acid, 4,4-[3-(2-pyridinyl)-1,2,4-triazine-5,6-diyl]bis-, monosodium salt (<1%) CAS#: 69898-45-9	Group III Chemical	-	-

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

14. TRANSPORT INFORMATION

DOT

UN/ID no UN2922
Proper shipping name Corrosive liquids, toxic, n.o.s.
DOT Technical Name Thioglycolic acid
Hazard Class 8
Subsidiary class 6.1
Packing Group II
Description UN2922, Corrosive liquids, toxic, n.o.s. (Thioglycolic acid), 8 (6.1), II
Emergency Response Guide Number 154

TDG

UN/ID no UN2922
Proper shipping name Corrosive Liquid, Toxic, N.O.S.
TDG Technical Name Thioglycolic acid
Hazard Class 8
Subsidiary class 6.1
Packing Group II

Description UN2922, Corrosive liquid, toxic, n.o.s. (Thioglycolic acid), 8 (6.1), II

IATA

UN/ID no UN2922
Proper shipping name Corrosive liquid, toxic, n.o.s.
IATA Technical Name Thioglycolic acid
Hazard Class 8
Subsidiary hazard class 6.1
Packing Group II
ERG Code 8P
Special precautions for user A3, A803

IMDG

UN/ID no UN2922
Proper shipping name Corrosive liquid, toxic, n.o.s.
IMDG Technical Name Thioglycolic acid
Hazard Class 8
Subsidiary hazard class 6.1
Packing Group II
EmS-No F-A, S-B
Special precautions for user 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 Does not comply
IECSC Complies
KECL Complies
PICCS Does not comply
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)

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

Chemical name	New Jersey	Massachusetts	Pennsylvania
Thioglycolic acid 68-11-1	X	X	X

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 - 3	Flammability - 0	Instability - 0	Physical and chemical properties -
HMIS	Health hazards - 2 - *	Flammability - 0	Physical hazards - 0	Personal protection - X

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

NIOSH IDLH

Immediately Dangerous to Life or Health

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ACGIH
NDF

ACGIH (American Conference of Governmental Industrial Hygienists)
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		

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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