



Be Right™

SAFETY DATA SHEET

Product Name FerroVer® Iron Reagent

Issue Date 24-Oct-2022

Revision Date 28-Aug-2024

Version 1.2

1. Identification

Product identifier

Product Name FerroVer® Iron Reagent

Other names

Product Code(s) 2105769

Synonyms None.

Safety data sheet number M00135

Pure substance/mixture Mixture

Recommended use of the chemical and restrictions on use

Recommended Use Laboratory reagent. Iron determination.

Uses advised against Consumer use.

Manufacturer, importer or supplier name, address and telephone number

Manufacturer Address

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

Emergency telephone number

Taiwan

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

2. Hazard(s) identification

Chemical hazard classification

Acute toxicity - Oral	Category 4
Skin corrosion/irritation	Category 2
Serious eye damage/eye irritation	Category 1
Respiratory sensitization	Category 1
Specific target organ toxicity (single exposure)	Category 3
Acute aquatic toxicity	Category 3
Chronic aquatic toxicity	Category 3

Label elements

**Signal word**

Danger

Hazard statements

H302 - Harmful if swallowed

H315 - Causes skin irritation

H318 - Causes serious eye damage

H334 - May cause allergy or asthma symptoms or breathing difficulties if inhaled

H335 - May cause respiratory irritation

H412 - Harmful to aquatic life with long lasting effects

Precautionary statements

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

P332 + P313 - If skin irritation occurs: Get medical advice/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

P261 - Avoid breathing dust/fume/gas/mist/vapors/spray

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

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

P271 - Use only outdoors or in a well-ventilated area

P304 + P340 - IF INHALED: Remove person to fresh air and keep comfortable for breathing

P403 + P233 - Store in a well-ventilated place. Keep container tightly closed

P405 - Store locked up

P273 - Avoid release to the environment

P270 - Do not eat, drink or smoke when using this product

P301 + P312 - IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell

P330 - Rinse mouth

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

Other hazards

No information available.

3. Composition/information on ingredients

Chemical Family

Mixture

Substance

Not applicable.

Mixture**Chemical nature**

Mixture of organic compounds.

Chemical name	English chemical name	Formula	CAS No.	Percent Range
Sodium thiosulfate	Sodium thiosulfate	Na ₂ S ₂ O ₃	7772-98-7	40 - 50%
Sodium metabisulfite	Sodium metabisulfite	Na ₂ S ₂ O ₅	7681-57-4	20 - 30%

Sodium dithionite	Sodium dithionite	Na ₂ S ₂ O ₄	7775-14-6	10 - 20%
1,10-Phenanthroline, mono(4-methylbenzenesulfonate)	1,10-Phenanthroline, mono(4-methylbenzene sulfonate)	C ₁₉ H ₁₀ N ₂ O ₃ S	92798-16-8	1 - 5%

4. First-aid measures

Different exposure routes and first aid procedures

General advice	Show this safety data sheet to the doctor in attendance. Immediate medical attention is required.
Inhalation	Remove to fresh air. May cause allergic respiratory reaction. If breathing has stopped, give artificial respiration. Get medical attention immediately. Avoid direct contact with skin. Use barrier to give mouth-to-mouth resuscitation. Get immediate medical attention.
Skin contact	Wash off immediately with soap and plenty of water for at least 15 minutes. May cause an allergic skin reaction. In the case of skin irritation or allergic reactions see a physician.
Eye contact	Get immediate medical attention. 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.
Ingestion	Do NOT induce vomiting. Rinse mouth. Never give anything by mouth to an unconscious person. May produce an allergic reaction. Get immediate medical attention.
<u>Most important symptoms and effects</u>	Burning sensation. May cause allergy or asthma symptoms or breathing difficulties if inhaled. Coughing and/ or wheezing. Itching. Rashes. Hives.
<u>Self-protection of the first aider</u>	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. Use personal protective equipment as required. See section 8 for more information.
<u>Note to physicians</u>	May cause sensitization in susceptible persons. Treat symptomatically.

5. Fire-fighting measures

<u>Extinguishing media</u>	
Suitable Extinguishing Media	Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
Small Fire	Dry chemical or CO ₂ .
Large Fire	CAUTION: Use of water spray when fighting fire may be inefficient.
Unsuitable extinguishing media	Do not scatter spilled material with high pressure water streams.
<u>Specific hazards arising from the chemical</u>	Product is or contains a sensitizer. May cause sensitization by inhalation.
Hazardous combustion products	Thermal decomposition can lead to release of irritating and toxic gases and vapors. Sulfur oxides. Sodium monoxide. Carbon monoxide, Carbon dioxide.
<u>Specific/special fire-fighting measures</u>	Fires need to be assessed to determine appropriate protocols and safety measures for firefighting, including establishing safe zones, extinguishing media to be used, firefighter protection, and actions to control or extinguish the fire.
<u>Special protective equipment for</u>	Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear.

fire-fighters**6. Accidental release measures**

<u>Personal precautions</u>	Avoid contact with skin, eyes or clothing. Use personal protective equipment as required. Ensure adequate ventilation. 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.
Reference to other sections	See section 8 for more information. See section 13 for more information.
For emergency responders	Use personal protection recommended in Section 8.
<u>Environmental precautions</u>	Prevent further leakage or spillage if safe to do so.
<u>Methods for cleaning up</u>	Take up mechanically, placing in appropriate containers for disposal.
Prevention of secondary hazards	Clean contaminated objects and areas thoroughly observing environmental regulations.

7. Handling and storage

<u>Handling</u>	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. Ensure adequate ventilation. Take off contaminated clothing and wash before reuse. Avoid breathing vapors or mists. In case of insufficient ventilation, wear suitable respiratory equipment.
<u>Storage</u>	Keep containers tightly closed in a dry, cool and well-ventilated place. Keep out of the reach of children. Store locked up.
Incompatible materials	Strong acids. Strong bases. Strong oxidizing agents.

8. Exposure controls/personal protection

<u>Engineering controls</u>	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.
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Control parameters**Occupational exposure limits**

Chemical name	Taiwan	ACGIH TLV
Sodium metabisulfite 7681-57-4	-	TWA: 5 mg/m ³

*Legend**See section 16 for terms and abbreviations*

Biological limit value	This product, as supplied, does not contain any hazardous materials with biological limits established by the region specific regulatory bodies.
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Personal protective equipment

Respiratory protection	Wear breathing apparatus if exposed to vapors/dusts/aerosols.
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Eye/face protection	Tight sealing safety goggles.
Hand protection	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. Wear suitable gloves. Impervious gloves.
Skin and body protection	Wear suitable protective clothing. Long sleeved clothing.
<u>Hygiene Measures</u>	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.

9. Physical and chemical properties

Information on basic physical and chemical properties

Appearance	crystalline	Odor	Sulfur-like
Physical state	Solid	Odor threshold	No data available
Color	White to yellow		

<u>Property</u>	<u>Values</u>	<u>Remarks • Method</u>
Molecular weight	Not applicable	
pH	5.29	5% @ 20°C
Melting point / freezing point	192 °C / 377.6 °F	
Initial boiling point and boiling range	No data available	
Evaporation rate	Not applicable	
Vapor pressure	Not applicable	
Relative vapor density	No data available	
Specific gravity - VALUE 1	2.27	
Partition coefficient	log K _{ow} ~ -1.33	
Soil Organic Carbon-Water Partition Coefficient	log K _{oc} ~ -0.03	
Autoignition temperature	No data available	
Decomposition temperature	192.22 °C / 377.996 °F	
Dynamic viscosity	Not applicable	
Kinematic viscosity	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

Acid	Soluble	> 1000 mg/L	25 °C / 77 °F
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Other information**Corrosive to metals**

Steel Corrosion Rate 2.69 mm/yr / 0.11 in/yr
Aluminum Corrosion Rate 0.08 mm/yr / 0 in/yr

Volatile Organic Compounds (VOC) Content

Not applicable

Chemical name	CAS No.	Volatile organic compounds (VOC) content	CAA (Clean Air Act)
Sodium metabisulfite	7681-57-4	Not applicable	-
Sodium dithionite	7775-14-6	Not applicable	-
1,10-Phenanthroline, mono(4-methylbenzenesulfonate)	92798-16-8	No data available	-

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.

Other information

VOC content No information available
Bulk density No information available

10. Stability and reactivity

Stability Stable under normal conditions.

Reactivity No information available.

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 acids. Strong bases. Strong oxidizing agents.

Hazardous Decomposition Products Sulfur oxides. Carbon monoxide. Carbon dioxide.

11. Toxicological information

Information on likely routes of exposure

Product Information

Inhalation	May cause sensitization in susceptible persons. May cause irritation of respiratory tract.
Eye contact	Causes serious eye damage. May cause irreversible damage to eyes.
Skin contact	Repeated or prolonged skin contact may cause allergic reactions with susceptible persons. Causes skin irritation.
Ingestion	Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea. May cause additional affects as listed under "Inhalation". Harmful if swallowed.

Symptoms

Redness. Burning. May cause blindness. 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. Coughing and/ or wheezing. May cause redness and tearing of the eyes.

Acute toxicity

Numerical measures of toxicity - Product Information

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
Sodium metabisulfite (20 - 30%) CAS#: 7681-57-4	Rat LD ₅₀	500 mg/kg	None reported	None reported	No information available
Sodium dithionite (10 - 20%) CAS#: 7775-14-6	Mouse LD ₅₀	1500 mg/kg	None reported	None reported	ERMA
1,10-Phenanthroline, mono(4-methylbenzenesulfonate) (1 - 5%) CAS#: 92798-16-8	Rat LD ₅₀	245.6 mg/kg	None reported	None reported	Internal Data

Dermal Exposure Route

Chemical name	Endpoint type	Reported dose	Exposure time	Toxicological effects	Key literature references and sources for data
Sodium metabisulfite (20 - 30%) CAS#: 7681-57-4	Rat LD ₅₀	> 2000 mg/kg	None reported	None reported	LOLI

Inhalation (Dust/Mist) Exposure Route

Chemical name	Endpoint type	Reported dose	Exposure time	Toxicological effects	Key literature references and sources for data
Sodium metabisulfite (20 - 30%) CAS#: 7681-57-4	Rat LC ₅₀	> 5.5 mg/L	4 hours	None reported	RTECS

Skin corrosion/irritation

May cause skin irritation. Classification based on data available for ingredients. Causes skin irritation.

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
Sodium dithionite (10 - 20%) CAS#: 7775-14-6	Standard Draize Test	Rabbit	800 mg	None reported	Mild skin irritant	IUCLID

Serious eye damage/eye irritation

Classification based on data available for ingredients. Causes burns. Causes serious eye damage.

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 metabisulfite (20 - 30%) CAS#: 7681-57-4	Standard Draize Test	Rabbit	107 mg	None reported	Corrosive to eyes	RTECS
Sodium dithionite (10 - 20%) CAS#: 7775-14-6	Standard Draize Test	Rabbit	100 mg	None reported	Eye irritant	IUCLID

Respiratory or skin sensitization

May cause allergy or asthma symptoms or breathing difficulties if inhaled.

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 dithionite (10 - 20%) CAS#: 7775-14-6	Based on human experience	Human	Not confirmed to be a skin sensitizer	OECD 429: Skin Sensitization: Local Lymph Node Assay

Respiratory Sensitization Exposure Route

Chemical name	Test method	Species	Results	Key literature references and sources for data
Sodium metabisulfite (20 - 30%) CAS#: 7681-57-4	Based on human experience	Human	Confirmed to be a respiratory sensitizer	GESTIS

STOT - single exposure

May cause respiratory irritation.

Mixture

No data available.

Substance

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

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 metabisulfite (20 - 30%) CAS#: 7681-57-4	Rat TD _{Lo}	75 mg/kg	15 days	Biochemical Enzyme inhibition, induction, or change in blood or tissue levels (phosphatases and dehydrogenases) Kidney, Ureter, or Bladder Other changes in urine composition	RTECS
Sodium dithionite (10 - 20%) CAS#: 7775-14-6	Rat NOAEL	217 mg/kg	None reported	None reported	OECD 429: Skin Sensitization: Local Lymph Node Assay

Carcinogenicity

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

Mixture

No data available.

Ingredient Carcinogenicity Data

Test data reported below.

Chemical name	CAS No.	ACGIH	IARC	NTP	OSHA
Sodium metabisulfite	7681-57-4	-	Group 3	-	-
Sodium dithionite	7775-14-6	-	-	-	-
1,10-Phenanthroline, mono(4-methylbenzenesulfonate)	92798-16-8	-	-	-	-

Legend

ACGIH (American Conference of Governmental Industrial Hygienists)	Does not apply
IARC (International Agency for Research on Cancer)	Group 3 - Not Classifiable as to Carcinogenicity in Humans
NTP (National Toxicology Program)	Does not apply
OSHA	Does not apply

Oral Exposure Route

Chemical name	Endpoint type	Reported dose	Exposure time	Toxicological effects	Key literature references and sources for data
Sodium dithionite (10 - 20%) CAS#: 7775-14-6	None reported	942 mg/kg	2 years	Negative results for carcinogenicity	No information available

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 metabisulfite (20 - 30%) CAS#: 7681-57-4	Cytogenetic analysis	Hamster ovary	0.18 mg/L	None reported	Positive test result for mutagenicity	RTECS
Sodium dithionite (10 - 20%) CAS#: 7775-14-6	Mutation in microorganisms	<i>Salmonella typhimurium</i>	None reported	None reported	Negative	IUCLID

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 dithionite (10 - 20%) CAS#: 7775-14-6	Cytogenetic analysis	Rat	1200 mg/kg	None reported	Negative test result for mutagenicity	IUCLID

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 metabisulfite (20 - 30%) CAS#: 7681-57-4	Rat TD _{Lo}	20000 mg/kg	None reported	Effects on Newborn Stillbirth	RTECS

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 component(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 metabisulfite (20 - 30%) CAS#: 7681-57-4	96 hours	<i>Salmo gairdneri</i>	LC ₅₀	15 mg/L	IUCLID
Sodium dithionite (10 - 20%) CAS#: 7775-14-6	96 hours	<i>Leuciscus idus</i>	LC ₅₀	>= 46 mg/L	IUCLID
1,10-Phenanthroline, mono(4-methylbenz enesulfonate) (1 - 5%) CAS#: 92798-16-8	96 hours	None reported	LC ₅₀	1353 mg/L	ECOSARS

Crustacea

Chemical name	Exposure time	Species	Endpoint type	Reported dose	Key literature references and sources for data
Sodium dithionite (10 - 20%) CAS#: 7775-14-6	48 Hours	<i>Daphnia magna</i>	EC ₅₀	98 mg/L	IUCLID
1,10-Phenanthroline, mono(4-methylbenz enesulfonate) (1 - 5%) CAS#: 92798-16-8	48 Hours	None reported	LC ₅₀	717 mg/L	ECOSARS

Algae

Chemical name	Exposure time	Species	Endpoint type	Reported dose	Key literature references and sources for data
Sodium metabisulfite (20 - 30%) CAS#: 7681-57-4	96 hours	<i>Scenedesmus subspicatus</i>	EC ₅₀	40 mg/L	IUCLID
1,10-Phenanthroline, mono(4-methylbenz enesulfonate) (1 - 5%) CAS#: 92798-16-8	96 hours	None reported	EC ₅₀	402 mg/L	ECOSARS

Aquatic Chronic Toxicity

No data available.

Persistence and degradability**Mixture**

No data available.

Bioaccumulation**Mixture**

No data available.

Partition coefficient $\log K_{ow} \sim -1.33$

Mobility

Soil Organic Carbon-Water Partition Coefficient $\log K_{oc} \sim -0.03$

Other adverse effects

No information available.

13. Disposal considerations

Disposal methods

Dispose of in accordance with local regulations. Dispose of waste in accordance with environmental legislation. Do not reuse empty containers.

14. Transport information

DOT Not regulated

IMDG Not regulated

IATA Not regulated

China Not regulated

Additional information

15. Regulatory information

Regulatory information

National Regulations

See section 8 for national exposure control parameters

Applicable regulations:

Regulation on the designation and operation of chemicals for priority management
Labor Safety and Health Rules

Toxic and Concerned Chemical Substances Control Act

International Inventories

TCSI	Contact supplier for inventory compliance status.
TSCA	Complies.
DSL/NDSL	Complies.
EINECS/ELINCS	Complies.
ENCS	Complies.
IECSC	Complies.
KECL	Complies.
PICCS	Contact supplier for inventory compliance status.
AICS	Complies.
NZIoC	-.

TCSI - Taiwan Chemical Substance Inventory
 TSCA - United States Toxic Substances Control Act Section 8(b) Inventory
 DSL/NDL - Canadian Domestic Substances List/Non-Domestic Substances List
 EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances
 ENCS - Japan Existing and New Chemical Substances
 KECL - Korean Existing and Evaluated Chemical Substances
 IECSC - China Inventory of Existing Chemical Substances
 PICCS - Philippines Inventory of Chemicals and Chemical Substances
 AICS - Australian Inventory of Chemical Substances
 NZIoC - New Zealand Inventory of Chemicals

International Regulations

The Montreal Protocol on Substances that Deplete the Ozone Layer Not applicable

The Stockholm Convention on Persistent Organic Pollutants Not applicable

The Rotterdam Convention Not applicable

16. Other information

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)
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Ceiling	Ceiling Limit Value	MAC	Maximum Allowable Concentration
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 Date 28-Aug-2024
Revision Note None
Reference Sources for Section 11 See Section 11: TOXICOLOGICAL INFORMATION

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