



Be Right™

SAFETY DATA SHEET

Issue Date 13-08-2018

Revision Date 26-Jan-2024

Version 1.8

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1. IDENTIFICATION

Product identifier

Product Name CuVer® 2 Copper Reagent

Other means of identification

Product Code(s) 2188299

Safety data sheet number M00108

Recommended use of the chemical and restrictions on use

Recommended Use Water Analysis. Indicator for copper.

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)

Serious eye damage/eye irritation

Category 2A

Hazards not otherwise classified (HNOC)

Not applicable

Label elements

Signal word

Warning



Hazard statements

H319 - Causes serious eye irritation

Precautionary statements

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

Other Hazards Known

May be harmful if swallowed

Causes mild skin irritation

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 sulfite	7757-83-7	20 - 30%	-
Sodium dithionite	7775-14-6	<10%	-
Glycine, N,N-(1R,2R)-1,2-cyclohexanediyldis[N-(carboxymethyl)-, sodium salt (1:2), rel-	57137-35-6	<10%	-
[2,2-Biquinoline]-4,4-dicarboxylic acid, dipotassium salt	63451-34-3	1 - 5%	-

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 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.
Skin contact	Wash skin with soap and water.
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	Sulfur oxides. Sodium monoxide. Carbon monoxide, Carbon dioxide. Nitrogen oxides.
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. Use personal protective equipment as required.

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. Avoid contact with skin, eyes or clothing. Do not eat, drink or smoke when using this product.

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.

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. 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. Barrier creams may help to protect the exposed areas of skin.

Eye/face protection If splashes are likely to occur, wear safety glasses with side-shields.

Skin and body protection Wear suitable protective clothing.

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.

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	Color	White to yellow
Appearance	crystalline	Odor threshold	No data available
Odor	Slight		

<u>Property</u>	<u>Values</u>	<u>Remarks • Method</u>
Molecular weight	No data available	
pH	7.9	50 g/L
Melting point / freezing point	No data available	
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	1.98	
Partition coefficient	log K _{ow} ~ -2.36	
Soil Organic Carbon-Water Partition	log K _{oc} ~ -0.06	

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Coefficient
Autoignition temperature No data available
Decomposition temperature No data available
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

<u>Chemical Name</u>	<u>Solubility classification</u>	<u>Solubility</u>	<u>Solubility Temperature</u>
Acid	Slightly soluble	> 0.1 mg/L	25 °C / 77 °F

Other information

Metal Corrosivity

Steel Corrosion Rate 5.97 mm/yr / 0.24 in/yr
Aluminum Corrosion Rate 0.58 mm/yr / 0.02 in/yr

Volatile Organic Compounds (VOC) Content

Not applicable

Chemical name	CAS No	Volatile organic compounds (VOC) content	CAA (Clean Air Act)
Sodium sulfite	7757-83-7	No data available	-
Sodium dithionite	7775-14-6	Not applicable	-
Glycine, N,N-(1R,2R)-1,2-cyclohexanediylbis[N -(carboxymethyl)-, sodium salt (1:2), rel-	57137-35-6	No data available	-
[2,2-Biquinoline]-4,4-dicarboxylic acid, dipotassium salt	63451-34-3	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.

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

Sulfur oxides. Sodium monoxide. Carbon monoxide. Carbon dioxide. Nitrogen oxides.

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Product Information

Inhalation	May cause irritation of respiratory tract.
Eye contact	Causes serious eye irritation. May cause redness, itching, and pain.
Skin contact	May cause irritation. Prolonged contact may cause redness and irritation.
Ingestion	Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea.
Symptoms	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

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 sulfite (20 - 30%) CAS#: 7757-83-7	Rat LD ₅₀	3560 mg/kg	None reported	None reported	GESTIS

Sodium dithionite (<10%) CAS#: 7775-14-6	Mouse LD ₅₀	1500 mg/kg	None reported	None reported	ERMA
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Dermal Exposure Route

Chemical name	Endpoint type	Reported dose	Exposure time	Toxicological effects	Key literature references and sources for data
Sodium sulfite (20 - 30%) CAS#: 7757-83-7	Rat LD ₅₀	2000 mg/kg	None reported	None reported	EPA

Inhalation (Dust/Mist) Exposure Route

Chemical name	Endpoint type	Reported dose	Exposure time	Toxicological effects	Key literature references and sources for data
Sodium sulfite (20 - 30%) CAS#: 7757-83-7	Rat LC ₅₀	5.5 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

ATE _{mix} (oral)	4,871.00 mg/kg
ATE _{mix} (dermal)	No information available
ATE _{mix} (inhalation-dust/mist)	19.00 mg/l
ATE _{mix} (inhalation-vapor)	86.00 mg/l
ATE _{mix} (inhalation-gas)	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
Sodium sulfite (20 - 30%) CAS#: 7757-83-7	Standard Draize Test	Rabbit	500 mg	4 hours	Not corrosive or irritating to skin	ECHA
Sodium dithionite (<10%) CAS#: 7775-14-6	Standard Draize Test	Rabbit	800 mg	None reported	Mild skin irritant	IUCLID

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
Sodium sulfite (20 - 30%) CAS#: 7757-83-7	Standard Draize Test	Rabbit	162 mg	None reported	Mild eye irritant	ECHA
Sodium dithionite (<10%) CAS#: 7775-14-6	Standard Draize Test	Rabbit	100 mg	None reported	Eye irritant	IUCLID
Glycine, N,N-(1R,2R)-1,2-cyclohexanediybis[N-(carboxymethyl)-, sodium salt (1:2), rel- (<10%) CAS#: 57137-35-6	None reported	Rabbit	None reported	None reported	Eye irritant	IUCLID

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 dithionite (<10%) 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 sulfite (20 - 30%) CAS#: 7757-83-7	Based on human experience	Human	Confirmed to be a respiratory sensitizer	OECD 429: Skin Sensitization: Local Lymph Node Assay

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

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 dithionite (<10%) 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 sulfite	7757-83-7	-	Group 3	-	-
Sodium dithionite	7775-14-6	-	-	-	-
Glycine, N,N-(1R,2R)-1,2-cyclohexanediyldis[N-(carboxymethyl)-, sodium salt (1:2), rel-	57137-35-6	-	-	-	-
[2,2-Biquinoline]-4,4-dicarboxylic acid, dipotassium salt	63451-34-3	-	-	-	-

Legend

ACGIH (American Conference of Governmental Industrial Hygienists)	Does not apply
IARC (International Agency for Research on Cancer)	Group 3 - Not classifiable as a human carcinogen
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%) 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 sulfite (20 - 30%) CAS#: 7757-83-7	Cytogenetic analysis	Mouse sperm cells	25 mg/L	None reported	Positive test result for mutagenicity	RTECS
Sodium dithionite (<10%)	Mutation in microorganisms	<i>Salmonella typhimurium</i>	None reported	None reported	Negative	IUCLID

CAS#: 7775-14-6						
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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%) 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
 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 sulfite (20 - 30%) CAS#: 7757-83-7	96 hours	<i>Leuciscus idus</i>	LC ₅₀	170 mg/L	OECD 429: Skin Sensitization: Local Lymph Node Assay
Sodium dithionite (<10%) CAS#: 7775-14-6	96 hours	<i>Leuciscus idus</i>	LC ₅₀	>= 46 mg/L	IUCLID
Glycine, N,N-(1R,2R)-1,2-cycl	96 hours	None reported	LC ₅₀	35600 mg/L	ECOSARS

ohexanediybis[N-(carboxymethyl)-, sodium salt (1:2), rel- (<10%) CAS#: 57137-35-6					
[2,2-Biquinoline]-4,4-dicarboxylic acid, dipotassium salt (1 - 5%) CAS#: 63451-34-3	96 hours	None reported	LC ₅₀	658 mg/L	ECOSARS

Crustacea

Chemical name	Exposure time	Species	Endpoint type	Reported dose	Key literature references and sources for data
Sodium sulfite (20 - 30%) CAS#: 7757-83-7	48 Hours	<i>Daphnia magna</i>	EC ₅₀	18 mg/L	OECD 429: Skin Sensitization: Local Lymph Node Assay
Sodium dithionite (<10%) CAS#: 7775-14-6	48 Hours	<i>Daphnia magna</i>	EC ₅₀	98 mg/L	IUCLID
Glycine, N,N-(1R,2R)-1,2-cyclohexanediybis[N-(carboxymethyl)-, sodium salt (1:2), rel- (<10%) CAS#: 57137-35-6	48 Hours	None reported	LC ₅₀	26162 mg/L	ECOSARS
[2,2-Biquinoline]-4,4-dicarboxylic acid, dipotassium salt (1 - 5%) CAS#: 63451-34-3	48 Hours	None reported	LC ₅₀	442 mg/L	ECOSARS

Algae

Chemical name	Exposure time	Species	Endpoint type	Reported dose	Key literature references and sources for data
Sodium sulfite (20 - 30%) CAS#: 7757-83-7	None reported	<i>Chlamydomonas reinhardtii</i>	EC ₅₀	63 mg/L	OECD 429: Skin Sensitization: Local Lymph Node Assay
Glycine, N,N-(1R,2R)-1,2-cyclohexanediybis[N-(carboxymethyl)-, sodium salt (1:2), rel- (<10%) CAS#: 57137-35-6	96 hours	None reported	EC ₅₀	56103 mg/L	ECOSARS
[2,2-Biquinoline]-4,4-dicarboxylic acid, dipotassium salt (1 - 5%) CAS#: 63451-34-3	96 hours	None reported	EC ₅₀	659 mg/L	ECOSARS

Aquatic Chronic Toxicity
 No data available.

Persistence and degradability

Mixture
 No data available.

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Bioaccumulation

MATERIAL DOES NOT BIOACCUMULATE

Mixture

No data available.

Partition coefficient

log K_{ow} ~ -2.36

Mobility

Soil Organic Carbon-Water Partition Coefficient

log K_{oc} ~ -0.06

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.

14. TRANSPORT INFORMATION

DOT

Not regulated

TDG

Not regulated

IATA

Not regulated

IMDG

Not regulated

Note:

No special precautions necessary.

Additional information

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

Does not comply

KECL

Complies

PICCS

Does not comply

TCSI

Complies

AICS

Does not comply

NZIoC

Complies

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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	No
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

U.S. - Department of Homeland Security - Chemical Facility Anti-Terrorism Standards (CFATS) - Security Issues

Chemical name	U.S. - Department of Homeland Security - Chemical Facility Anti-Terrorism Standards (CFATS) - Security Issues
Sodium dithionite (<10%) CAS#: 7775-14-6	Sabotage/Contamination

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 dithionite 7775-14-6	X	X	X

U.S. EPA Label Information

Chemical name	FIFRA	FDA
Sodium sulfite	180.0910	21 CFR 182.3798
Sodium dithionite	-	21 CFR 182.90

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 sulfite 7757-83-7	Declarable Substance (LR) Prohibited Substance (LR)	None reported

NFPA and HMIS Classifications

NFPA	Health hazards - 2	Flammability - 0	Instability - 0	Physical and chemical properties -
HMIS	Health hazards - 2	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)

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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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Revision Note SDS sections updated
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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.

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