

# SAFETY DATA SHEET

Issue Date 03-Jun-2021

Revision Date 26-Jan-2024

Version 1.8

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## **1. IDENTIFICATION**

<u>Product identifier</u> Product Name	DithiVer <sup>®</sup> Metals Reagent
Other means of identification Product Code(s)	1261699
Safety data sheet number	M00047
Performended use of the chemical	and restrictions on use

 Recommended use of the chemical and restrictions on use

 Recommended Use
 Indicator of heavy metals. 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)

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
Chronic aquatic toxicity	Category 3

## Hazards not otherwise classified (HNOC)

Not applicable

## Label elements

# Signal word

Danger

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## 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

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

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

P284 - Wear respiratory protection

P304 + P340 - IF INHALED: 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

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

P302 + P350 - IF ON SKIN: Gently wash with plenty of soap and water

- P332 + P313 If skin irritation occurs: Get medical attention
- P301 + P312 IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell

## Other Hazards Known

May be harmful in contact with skin Harmful to aquatic life

## **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 #
Sodium metabisulfite	7681-57-4	90 - 100%	-
Diazenecarbothioic acid, phenyl-, 2-phenylhydrazide	60-10-6	<1%	-

## 4. FIRST AID MEASURES

#### Description of first aid measures

General advice	Immediate medical attention is required. Show this safety data sheet to the doctor in attendance.
Inhalation	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 advice/attention. Remove to fresh air.
Eye contact	Get immediate medical advice/attention. Do not rub affected area. Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Keep eye wide open while
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	rinsing. Remove contact lenses, if present and easy to do. Continue rinsing.		
Skin contact	May cause an allergic skin reaction. In the case of skin irritation or allergic reactions see a physician. Wash off immediately with soap and plenty of water for at least 15 minutes.		
Ingestion	May produce an allergic reaction. Get immediate medical advice/attention. Clean mouth with water and drink afterwards plenty of water. Never give anything by mouth to an unconscious person. Do NOT induce vomiting.		
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 direct contact with skin. Use barrier to give mouth-to-mouth resuscitation. Avoid contact with skin, eyes or clothing.		
Most important symptoms and effe	cts, 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.		
Indication of any immediate medica	al attention and special treatment needed		
Note to physicians	May cause sensitization in susceptible persons. 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	Product is or contains a sensitizer. May cause sensitization by inhalation and skin contact.		
Hazardous combustion products	Sodium monoxide. Sulfur 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 ed	quipment and emergency procedures		
Personal precautions	Keep people away from and upwind of spill/leak. Evacuate personnel to safe areas. Avoid contact with skin, eyes or clothing. Ensure adequate ventilation. Use personal protective equipment as required.		
Other Information	Refer to protective measures listed in Sections 7 and 8.		
Environmental precautions			
Environmental precautions	Prevent further leakage or spillage if safe to do so.		
Methods and material for containm	ent and cleaning up		

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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	Provide extract ventilation to points where emissions occur. Remove contaminated clothing and shoes. Avoid contact with skin, eyes or clothing. Do not eat, drink or smoke when using this product. Take off contaminated clothing and wash before reuse. Handle in accordance with good industrial hygiene and safety practice. Ensure adequate ventilation. Avoid breathing vapors or mists. In case of insufficient ventilation, wear suitable respiratory equipment.

Conditions for safe storage, including any incompatibilities

# Storage ConditionsStore locked up. Keep out of the reach of children. Keep containers tightly closed in a dry,<br/>cool and well-ventilated place.

## Flammability class Not applicable

# 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

## Control parameters

## **Exposure Guidelines**

Chemical name	ACGIH TLV	OSHA PEL	NIOSH	
Sodium metabisulfite	TWA: 5 mg/m <sup>3</sup>	(vacated) TWA: 5 mg/m <sup>3</sup>	TWA: 5 mg/m <sup>3</sup>	
CAS#: 7681-57-4	6	, , C	Ũ	
Appropriate engineering controls				
Engineering Controls	Showers			
	Evewash stations			
	Ventilation systems.			
	vontalation by storne.			
Individual protection measures, suc	ch as personal protective equi	pment		
Respiratory protection			ons If exposure limits are	
		No protective equipment is needed under normal use conditions. If exposure limits are exceeded or irritation is experienced, ventilation and evacuation may be required.		
	exceeded of inflation to experienced, ventilation and evaluation may be required.			
Hand Protection	Wear suitable gloves. Impervice	ous aloves		
Eye/face protection	Tight sealing safety goggles.			
	nghi coaing carety goggioor			
Skin and body protection	Wear suitable protective clothing. Long sleeved clothing.			
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General Hygiene Considerations	Avoid contact with skin, eyes or clothing. Remove and wash contaminated clothing and			
,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	gloves, including the inside, before re-use. Wear suitable gloves and eye/face protection. Do			
	not eat, drink or smoke when using this product.			
Environmental exposure controls	Local authorities should be adv	vised if significant spillages can	not be contained. Do not allow	

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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 Appearance Odor	powder Sulfidic	Solid		Color Odor threshold	Gray No data ava	ailable
Property_			Values			Remarks • Method
Molecular weight	t		No data availal	ble		
рН			~ 5			5% @ 20°C
Melting point / fro	eezing point		170 °C / 33	8 °F		
Initial boiling poi	nt and boiling rang	e	No data availal	ble		
Evaporation rate			Not applicable			
Vapor pressure			Not applicable			
Relative vapor de	ensity		No data availa	able		
Specific gravity -	VALUE 1		2.32			
Partition coeffici	ent		log K <sub>ow</sub> ~ 0			
Soil Organic Car Coefficient	bon-Water Partitio	ı	log K <sub>oc</sub> ~ 0			
Autoignition tem	perature		No data availal	ble		
Decomposition t	emperature		No data availal	ble		
Dynamic viscosi	ty		Not applicable			
Kinematic viscos	sity		Not applicable			

## Solubility(ies)

## Water solubility

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

## Solubility in other solvents

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

## **Other information**

#### **Metal Corrosivity**

#### Steel Corrosion Rate Aluminum Corrosion Rate

0.1 mm/yr / 0 in/yr 0.48 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 metabisulfite	7681-57-4	Not applicable	-
Diazenecarbothioic acid, phenyl-, 2-phenylhydrazide	60-10-6	No data available	-

#### **Explosive properties**

Upper explosion limit Lower explosion limit	No data available No data available
Flammable properties	
Flash point	Not applicable
Flammability Limit in Air Upper flammability limit: Lower flammability limit:	No data available No data available
Oxidizing properties	No data available.
Bulk density	No data available

## **10. STABILITY AND REACTIVITY**

Reactivity Not applicable.

<u>Chemical stability</u> 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.

<u>Conditions to avoid</u> None known based on information supplied.

## Incompatible materials

Strong acids. Strong bases. Strong oxidizing agents.

# Hazardous decomposition products

Sulfur oxides.

## **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	Severely irritating to eyes. Causes serious eye damage. May cause burns. May cause irreversible damage to eyes.
Skin contact	Repeated or prolonged skin contact may cause allergic reactions with susceptible persons. Causes skin irritation.
Ingestion	May cause additional affects as listed under "Inhalation". Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea. Harmful if swallowed.
Symptoms	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. Redness. May cause redness and tearing of the eyes.
Acute toxicity	

Acute toxicity Harmful if swallowed

**Mixture** No data available.

## **Ingredient Acute Toxicity Data**

Test data reported below.

## **Oral Exposure Route**

Chemical name	Endpoint	Reported	Exposure	Toxicological effects	Key literature references and
	type	dose	time		sources for data
Sodium metabisulfite	Rat	500 mg/kg	None reported	None reported	No information available
(90 - 100%)	LD50				
CAS#: 7681-57-4					

## Dermal Exposure Route

cal name Endpoint Reported Exposu type dose time	Toxicological effects	Key literature references and sources for data
netabisulfite Rat > 2000 mg/kg None repo 100%) LD <sub>50</sub>	d None reported	LOLI
netabisulfite Rat > 2000 mg/kg None repo	d None reported	

## Inhalation (Dust/Mist) Exposure Route

Chemical name	Endpoint type	Reported dose	Exposure time	Toxicological effects	Key literature references and sources for data
Sodium metabisulfite (90 - 100%) CAS#: 7681-57-4	Rat LC <sub>50</sub>	> 5.5 mg/L	4 hours	None reported	RTECS

## Unknown Acute Toxicity

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

## Acute Toxicity Estimations (ATE)

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

ATEmix (oral)	502.00 mg/kg
ATEmix (dermal)	2,008.00 mg/kg

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

#### Skin corrosion/irritation

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

#### Mixture

No data available.

#### Ingredient Skin Corrosion/Irritation Data

No data available.

## Serious eye damage/irritation

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

#### Mixture

No data available.

## Ingredient Eye Damage/Eye Irritation Data

Test data reported below.

Chemical name	Test method	Species	Reported dose	Exposure time	Results	Key literature references and sources for data
Sodium metabisulfite (90 - 100%) CAS#: 7681-57-4	Standard Draize Test	Rabbit	107 mg	None reported	Corrosive to eyes	RTECS

## Respiratory or skin sensitization

May cause sensitization by inhalation.

#### Mixture

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
Sodium metabisulfite (90 - 100%) 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.

# 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 metabisulfite (90 - 100%) CAS#: 7681-57-4	Rat TD⊾₀	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

## Carcinogenicity

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

## Mixture

No data available.

## Ingredient Carcinogenicity Data

No data available.

Chemical name	CAS No	ACGIH	IARC	NTP	OSHA
Sodium metabisulfite	7681-57-4	-	Group 3	-	-
Diazenecarbothioic acid,	60-10-6	-	-	-	-
phenyl-, 2-phenylhydrazide					

## 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

## 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 (90 - 100%) CAS#: 7681-57-4	Cytogenetic analysis	Hamster ovary	0.18 mg/L	None reported	Positive test result for mutagenicity	RTECS

## Mixture invivo Data

No data available.

**Substance** invivo **Data** No data available.

## Reproductive toxicity

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

#### Mixture

No data available.

## Ingredient Reproductive Toxicity Data

Test data reported below.

### Oral Exposure Route

Chemical name	Endpoint type	Reported dose	Exposure time	Toxicological effects	Key literature references and sources for data
Sodium metabisulfite	Rat	20000 mg/kg	None reported	Effects on Newborn	RTECS
(90 - 100%)	TDLo			Stillbirth	
CAS#: 7681-57-4					

#### 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.					
<u>Mixture</u>						

#### 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 (90 - 100%) CAS#: 7681-57-4	96 hours	Salmo gairdneri	LC50	15 mg/L	IUCLID

#### Algae

Chemical name	Exposure time	Species	Endpoint type	Reported dose	Key literature references and sources for data
Sodium metabisulfite (90 - 100%) CAS#: 7681-57-4	96 hours	Scenedesmus subspicatus	EC50	40 mg/L	IUCLID

## Aquatic Chronic Toxicity

No data available.

## Persistence and degradability

Mixture

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No data available.	No data available.						
Bioaccumulation MATERIAL DOES NOT BIOACCUMULATE Mixture No data available.							
Partition coefficient		log Kow ~ 0					
<u>Mobility</u>							
Soil Organic Carbon-Water Partition	n Coefficient	log K <sub>oc</sub> ~ 0					
Other adverse effects No information available							
	13. DISPOSAL C	ONSIDERAT	IONS				
Waste treatment methods							
Waste from residues/unused products	Dispose of in accordance environmental legislation		ations. Dispose of waste in accordance with				
Contaminated packaging	Do not reuse empty cont	ainers.					
Special instructions for disposal	<b>Special instructions for disposal</b> Work in an approved fume hood. Dilute material with excess water making a weaker than 5% solution. Adjust to a pH between 6 and 9 with an alkali, such as soda ash or sodium bicarbonate. 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.						
	14. TRANSPOR	RT INFORMAT	TION				
DOT	Not regulated						
TDG	Not regulated						
IATA	Not regulated						
IMDG	Not regulated						
Note:	No special precautions n	ecessary.					
Additional information							

## 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 DSL/NDSL

Complies Complies

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

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# International Inventories

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

EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances

**ENCS** - Japan Existing and New Chemical Substances

**IECSC** - China Inventory of Existing Chemical Substances

**KECL** - Korean Existing and Evaluated Chemical Substances

**PICCS** - Philippines Inventory of Chemicals and Chemical Substances

TCSI - Taiwan Chemical Substances Inventory

AICS - Australian Inventory of Chemical Substances

NZIOC - New Zealand Inventory of Chemicals

## **US Federal Regulations**

#### SARA 313

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

## SARA 311/312 Hazard Categories

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

## 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 metabisulfite	Х	Х	Х
7681-57-4			

## U.S. EPA Label Information

Chemical name	FIFRA	FDA
Sodium metabisulfite	-	21 CFR 182.3766

# 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 metabisulfite 7681-57-4	Declarable Substance (LR) Prohibited Substance (LR)	None reported

## **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 - I

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

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

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

TWA	TWA (time-weighted average)		STEL	STEL (Short Term Exposure Limit)
MAC	Maximum Allowable Concentration		Ceiling	Ceiling Limit Value
X	Listed		Vacated	These values have no official status. The only binding levels of contaminants are those listed in the final OSHA PEL. These lists are for reference purposes only. Please note that some reference state regulations of these "liberated" exposure limits in their state regulations.
SKN* RSP+ C M	Skin designation Respiratory sensitization Carcinogen mutagen		SKN+ ** R	Skin sensitization Hazard Designation Reproductive toxicant
Prepared By		Hach Product Compliance Department		
Issue Date	03-Jun-2021			
<b>Revision Date</b>	sion Date 26-Jan-2024			
<b>Revision Note</b>		None		
Disclaimer				

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

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

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End of Safety Data Sheet