

# SAFETY DATA SHEET

Be Right<sup>™</sup>

Issue Date 22-05-2019 Revision Date 08-Feb-2023 Version 2.3 Page 1/14 **1. IDENTIFICATION** Product identifier **Product Name** Chromium 2 Reagent Other means of identification Product Code(s) 204499 M00034 Safety data sheet number UN/ID no UN3261 Recommended use of the chemical and restrictions on use **Recommended Use** Laboratory reagent. Debrominating reagent in Total Chromium Test. Uses advised against Consumer use. For Laboratory Use Only. **Restrictions on use** Details of the supplier of the safety data sheet Manufacturer Address Hach Company, P.O.Box 389, Loveland, CO 80539, USA, +1(970) 669-3050

## Emergency telephone number

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

2. HAZARDS IDENTIFICATION

#### Classification

#### **Regulatory Status**

This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Corrosive to metals	Category 1
Skin corrosion/irritation	Category 1
Serious eye damage/eye irritation	Category 1

# Hazards not otherwise classified (HNOC)

Not applicable

# Label elements

Signal word Danger

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#### Hazard statements

H290 - May be corrosive to metals H314 - Causes severe skin burns and eye damage

#### **Precautionary statements**

P260 - Do not breathe dust/fume/gas/mist/vapors/spray

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

P301 + P330 + P331 - IF SWALLOWED: rinse mouth. Do NOT induce vomiting

P303 + P361 + P353 - IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower

P304 + P340 - IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing

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

P234 - Keep only in original container

P390 - Absorb spillage to prevent material damage

#### Other Hazards Known

May be harmful if swallowed

# **3. COMPOSITION/INFORMATION ON INGREDIENTS**

Substance Not applicable

**Mixture** 

Chemical Family Chemical nature Mixture. Mixture of inorganic salts, Mixture of organic compounds.

## Percent ranges are used where confidential product information is applicable.

Chemical name	CAS No	Percent Range	HMRIC #
Benzoic acid, 2-hydroxy-5-sulfo-	97-05-2	60 - 70%	-
Sodium sulfate	7757-82-6	10 - 20%	-

# 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.

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Eye contact	Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Keep eye wide open while rinsing. Do not rub affected area. Get immediate medical advice/attention.
Skin contact	Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. Get immediate medical advice/attention.
Ingestion	Clean mouth with water and drink afterwards plenty of water. Never give anything by mouth to an unconscious person. Do NOT induce vomiting. Get immediate medical advice/attention.
Self-protection of the first aider	Avoid contact with skin, eyes or clothing. Ensure that medical personnel are aware of the material(s) involved, take precautions to protect themselves and prevent spread of contamination. Avoid direct contact with skin. Use barrier to give mouth-to-mouth resuscitation.
Most important symptoms and effe	ects, both acute and delayed
Symptoms	Burning sensation.
Indication of any immediate medic	al attention and special treatment needed
Note to physicians	Product is a corrosive material. Use of gastric lavage or emesis is contraindicated. Possible perforation of stomach or esophagus should be investigated. Do not give chemical antidotes. Asphyxia from glottal edema may occur. Marked decrease in blood pressure may occur with moist rales, frothy sputum, and high pulse pressure.
	5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media	Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
Unsuitable Extinguishing Media	Caution: Use of water spray when fighting fire may be inefficient.
Specific hazards arising from the chemical	The product causes burns of eyes, skin and mucous membranes. Thermal decomposition can lead to release of irritating gases and vapors.
Hazardous combustion products	Nitrogen oxides. Sodium oxides. Carbon monoxide, Carbon dioxide. 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, protect	ctive equipment and emergency procedures
Personal precautions	Avoid contact with skin, eyes or clothing. Ensure adequate ventilation. Use personal protective equipment as required. Attention! Corrosive material. Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak.
Other Information	Refer to protective measures listed in Sections 7 and 8.

# Environmental precautions

Environmental precautions	Prevent further leakage or spillage if safe to do so. Should not be released into the environment. Do not allow to enter into soil/subsoil. Prevent product from entering drains.
Methods and material for containm	ent and cleaning up
Methods for containment	Prevent further leakage or spillage if safe to do so.
Methods for cleaning up	Pick up and transfer to properly labeled containers.
Prevention of secondary hazards	Clean contaminated objects and areas thoroughly observing environmental regulations.
Reference to other sections	See section 8 for more information. See section 13 for more information.

# 7. HANDLING AND STORAGE

Precautions for safe handling	
Advice on safe handling	Handle in accordance with good industrial hygiene and safety practice. Avoid contact with skin, eyes or clothing. In case of insufficient ventilation, wear suitable respiratory equipment. Handle product only in closed system or provide appropriate exhaust ventilation. Do not eat, drink or smoke when using this product. Take off contaminated clothing and wash before reuse.
Conditions for safe storage, includi	ng any incompatibilities
Storage Conditions	Keep containers tightly closed in a dry, cool and well-ventilated place. Protect from moisture. Store locked up. Keep out of the reach of children. Store away from other materials.
Flammability class	Not applicable

# 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters	
Exposure Guidelines	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.
	ch 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	Wear suitable gloves and eye/face protection. Do not eat, drink or smoke when using this product. Regular cleaning of equipment, work area and clothing is recommended. Avoid

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	contact with skin, eyes or clothing. Remove and wash contaminated clothing and gloves, including the inside, before re-use. Contaminated work clothing should not be allowed out of the workplace. Wash hands before breaks and immediately after handling the product.
Environmental exposure controls	Local authorities should be advised if significant spillages cannot be contained. Do not allow into any sewer, on the ground or into any body of water.
Thermal hazards	None under normal processing.

# 9. PHYSICAL AND CHEMICAL PROPERTIES

# Information on basic physical and chemical properties

Physical state Appearance Odor	powder Odorless	Solid		Color Odor threshold	White to bro Not applical	
Property_			Values			Remarks • Method
Molecular weight	t		Not applicable			
рН			1.2			5% @ 20°C
Melting point / fro	eezing point		155 °C / 31	1 °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	ble		
Specific Gravity			1.61			
Partition coefficie	ent		log Kow ~ -2.01			
Soil Organic Carl	bon-Water Partition	า	log K <sub>oc</sub> ~ -0.18			
Autoignition tem	perature		No data availal	ble		
Decomposition to	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
Moderately soluble	> 100 mg/L	20 °C / 68 °F

# Solubility in other solvents

Chemical Name	Solubility classification	<u>Solubility</u>	Solubility Temperature
None reported	No information available	No data available	No information available

# **Other information**

#### **Metal Corrosivity**

Steel Corrosion Rate Aluminum Corrosion Rate Product NameChromium 2 ReagentRevision Date08-Feb-2023Page6 / 14

10.41 mm/yr / 0.41 in/yr 3 mm/yr / 0.12 in/yr

Volatile Organic Compounds (VOC) Content Not applicable

Chemical name	CAS No	Volatile organic compounds (VOC) content	CAA (Clean Air Act)
Benzoic acid, 2-hydroxy-5-sulfo-	97-05-2	No data available	-
Sodium sulfate	7757-82-6	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

Corrosive on contact with water. Corrosive to metal.

## Chemical stability

Stable under normal conditions.

#### **Explosion data**

Sensitivity to Mechanical Impact None. Sensitivity to Static Discharge None.

#### Possibility of hazardous reactions

None under normal processing.

## Hazardous polymerization

Hazardous polymerization does not occur.

# Conditions to avoid

Exposure to air or moisture over prolonged periods.

#### Incompatible materials

Oxidizing agent. Acids. Bases.

#### Hazardous decomposition products

Thermal decomposition can lead to release of irritating and toxic gases and vapors.

EN / AGHS

# **11. TOXICOLOGICAL INFORMATION**

#### Information on likely routes of exposure

#### **Product Information** Inhalation Corrosive by inhalation. Inhalation of corrosive fumes/gases may cause coughing, choking, headache, dizziness, and weakness for several hours. Pulmonary edema may occur with tightness in the chest, shortness of breath, bluish skin, decreased blood pressure, and increased heart rate. Inhaled corrosive substances can lead to a toxic edema of the lungs. Pulmonary edema can be fatal. Eye contact Causes burns. Corrosive to the eyes and may cause severe damage including blindness. Causes serious eye damage. May cause irreversible damage to eyes. Skin contact 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. Symptoms Redness. Burning. May cause blindness. Coughing and/ or wheezing.

## Acute toxicity

Based on available data, the classification criteria are not met

#### Mixture

No data available.

# Ingredient Acute Toxicity Data

No data available.

Chemical name	Endpoint type	Reported dose	Exposure time	Toxicological effects	Key literature references and sources for data
Benzoic acid, 2-hydroxy-5-sulfo- (60 - 70%) CAS#: 97-05-2	Rat LD₅o	1850 mg/kg	None reported	None reported	RTECS
Chemical name	Endpoint type	Reported dose	Exposure time	Toxicological effects	Key literature references and sources for data
Benzoic acid, 2-hydroxy-5-sulfo- (60 - 70%) CAS#: 97-05-2	Rabbit	7940 mg/kg	None reported	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)	2,907.00 mg/kg
ATEmix (dermal)	No information available
ATEmix (inhalation-dust/mist)	No information available
ATEmix (inhalation-vapor)	No information available
ATEmix (inhalation-gas)	No information available

#### Skin corrosion/irritation

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Causes severe burns.

#### Mixture

No data available.

## Ingredient Skin Corrosion/Irritation Data

No data available.

Chemical name	Test method	Species	Reported dose	Exposure time	Results	Key literature references and sources for data
Benzoic acid, 2-hydroxy-5-sulfo- (60 - 70%) CAS#: 97-05-2	None reported	None reported	None reported	None reported	Corrosive to skin	No information available
Sodium sulfate (10 - 20%) CAS#: 7757-82-6	Standard Draize Test	Rabbit	500 mg	4 hours	Not corrosive or irritating to skin	ECHA

#### 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

No data available.

Chemical name	Test method	Species	Reported dose	Exposure time	Results	Key literature references and sources for data
Benzoic acid, 2-hydroxy-5-sulfo- (60 - 70%) CAS#: 97-05-2	None reported	None reported	None reported	None reported	Corrosive to eyes	No information available
Sodium sulfate (10 - 20%) CAS#: 7757-82-6	Standard Draize Test	Rabbit	90 mg	24 hours	Not corrosive or irritating to eyes	ECHA

## Respiratory or skin sensitization

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

#### Mixture

No data available.

# Ingredient Sensitization Data

No data available.

Chemical name	Test method	Species	Results	Key literature references and sources for data
Sodium sulfate (10 - 20%) CAS#: 7757-82-6	OECD Test No. 406: Skin Sensitization	Guinea pig	Not confirmed to be a skin sensitizer	HSDB

# 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

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

## Mixture

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.

#### Mixture

No data available.

# Ingredient Carcinogenicity Data

No data available.

Chemical name	CAS No	ACGIH	IARC	NTP	OSHA
Benzoic acid,	97-05-2	-	-	-	-
2-hydroxy-5-sulfo-					
Sodium sulfate	7757-82-6	-	-	-	-

# 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	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 No data available.

**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

No data available.

Chemical name	Endpoint type	Reported dose	Exposure time	Toxicological effects	Key literature references and sources for data
Sodium sulfate	Mouse	14000 mg/kg	4 days	Effects on Newborn	RTECS
(10 - 20%)	TDLo			Other neonatal measures or	
CAS#: 7757-82-6				effects	

#### Aspiration hazard

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

# **12. ECOLOGICAL INFORMATION**

#### Ecotoxicity

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**

No data available.

Chemical name	Exposure time	Species	Endpoint type	Reported dose	Key literature references and sources for data
Sodium sulfate (10 - 20%) CAS#: 7757-82-6	96 hours	None reported	LC₅0	56 mg/L	IUCLID
Chemical name	Exposure time	Species	Endpoint type	Reported dose	Key literature references and sources for data
Sodium sulfate (10 - 20%) CAS#: 7757-82-6	48 Hours	Daphnia magna	EC <sub>50</sub>	3150 mg/L	IUCLID

Aquatic Chronic Toxicity

No data available.

# Persistence and degradability

# Mixture

No data available.

**Bioaccumulation** MATERIAL DOES NOT BIOACCUMULATE Mixture No data available.

## **Partition coefficient**

Mobility

Soil Organic Carbon-Water Partition Coefficient

Other adverse effects

No information available

# **13. DISPOSAL CONSIDERATIONS**

log Kow ~ -2.01

log Koc ~ -0.18

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Contaminated packaging	Do not reuse empty containers.
Waste from residues/unused products	Dispose of in accordance with local regulations. Dispose of waste in accordance with environmental legislation.
Waste treatment methods	

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US EPA Waste Number

Special instructions for disposal

D002

If permitted by regulation. 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. Dispose of material in an E.P.A. approved hazardous waste facility.

# **14. TRANSPORT INFORMATION**

# DOT

DOT UN/ID no Proper shipping name DOT Technical Name Transport hazard class(es) Packing Group Description Emergency Response Guide Number	UN3261 Corrosive Solid, Acidic, Organic, N.O.S. Benzoic acid, 2-hydroxy-5-sulfo- 8 III UN3261, Corrosive solid, acidic, organic, n.o.s. (Benzoic acid, 2-hydroxy-5-sulfo-), 8, III 154
TDG UN/ID no Proper shipping name TDG Technical Name Transport hazard class(es) Packing Group Description	UN3261 Corrosive Solid, Acidic, Organic, N.O.S. Benzoic acid, 2-hydroxy-5-sulfo- 8 III UN3261, Corrosive solid, acidic, organic, n.o.s., 8, III
IATA UN number or ID number Proper shipping name IATA Technical Name Transport hazard class(es) Packing group ERG Code Special precautions for user	UN3261 Corrosive solid, acidic, organic, n.o.s.* Benzoic acid, 2-hydroxy-5-sulfo- 8 III 8L A3, A803
IMDG UN number or ID number Proper shipping name IMDG Technical Name Transport hazard class(es) Packing Group EmS-No Special precautions for user	UN3261 Corrosive solid, acidic, organic, n.o.s.* Benzoic acid, 2-hydroxy-5-sulfo- 8 III F-A, S-B 223, 274

## 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     Complies		-	 -	-	-
TSCA Complies	National Inventories				
	TSCA	Complies			
DSL/NDSL Complies	DSL/NDSL	Complies			

EN / AGHS

**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	Does not comply
ENCS	Does not comply
IECSC	Complies
KECL - Existing substances	Complies
PICCS	Does not comply
TCSI	Complies
AICS	Does not comply
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 does not contain any substances regulated by state right-to-know regulations.

Chemical name	New Jersey	Massachusetts	Pennsylvania
Sodium sulfate	-	X	Х
7757-82-6			

# **U.S. EPA Label Information**

Chemical name	FIFRA	FDA	
Sodium sulfate	-	21 CFR 186.1797	

# 16. OTHER INFORMATION, INCLUDING DATE OF PREPARATION OF THE LAST REVISION

Special Comments

# 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 - 3	Flammability - 0	Physical hazards - 0	Personal protection -
				Х
				- 1

## 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	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	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-weight	ed average)	STEL	STEL (Short Term Exposure Limit)
MAC	Maximum Allowab	le Concentration	Ceiling	Ceiling Limit Value
Х	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 sensit Carcinogen mutagen	ization	SKN+ ** R	Skin sensitization Hazard Designation Reproductive toxicant
Prepared By		Hach Product Compliand	ce Department	
<b>Issue Date</b> 22-05-2019				
Revision Date 08-Feb-2023				
<b>Revision Note</b>		None		
Diselaimer				

# **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