

# SAFETY DATA SHEET

Issue Date 17-10-2019 Revision Date 08-Feb-2023 Version 5.4 Page 1 / 14

## 1. IDENTIFICATION

Product identifier

Product Name Acid Reagent

Other means of identification

Product Code(s) 2107469

Safety data sheet number M00025

UN/ID no UN2967

Recommended use of the chemical and restrictions on use

**Recommended Use** Water Analysis. Silica determination.

Uses advised againstNo information available.Restrictions on useFor Laboratory Use Only.

## Details of the supplier of the safety data sheet

#### **Manufacturer Address**

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

#### Emergency telephone number

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

## 2. HAZARDS IDENTIFICATION

### Classification

## **Regulatory Status**

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

Corrosive to metals	Category 1
Acute toxicity - Oral	Category 4
Skin corrosion/irritation	Category 2
Serious eye damage/eye irritation	Category 2A
Chronic aquatic toxicity	Category 3

### Hazards not otherwise classified (HNOC)

Not applicable

## Label elements

## Signal word

Warning

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#### **Hazard statements**

H290 - May be corrosive to metals

H302 - Harmful if swallowed

H315 - Causes skin irritation

H319 - Causes serious eye irritation

H412 - Harmful to aquatic life with long lasting effects

## **Precautionary statements**

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

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

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

P332 + P313 - If skin irritation occurs: Get medical attention

P362 - Take off contaminated clothing and wash before reuse

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

P273 - Avoid release to the environment

P234 - Keep only in original container

P390 - Absorb spillage to prevent material damage

#### Other Hazards Known

Harmful to aquatic life

### 3. COMPOSITION/INFORMATION ON INGREDIENTS

#### **Substance**

Not applicable

### **Mixture**

Chemical Family Mixture.

Chemical nature Mixture of inorganic compounds.

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

Chemical name	CAS No	Percent Range	HMRIC #
Sulfamic acid	5329-14-6	80 - 90%	-
Sodium chloride	7647-14-5	20 - 30%	-

	4. F	FIRST	AID	MEAS	URES
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**Description of first aid measures** 

**General advice** Show this safety data sheet to the doctor in attendance.

**Inhalation** Remove to fresh air. Get medical attention immediately if symptoms occur.

**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 off immediately with soap and plenty of water for at least 15 minutes. Get medical

attention if irritation develops and persists.

**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

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 This material will not burn.

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. Ensure adequate ventilation. Use personal

protective equipment as required.

Other Information Refer to protective measures listed in Sections 7 and 8.

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**Environmental precautions** 

Prevent further leakage or spillage if safe to do so. **Environmental precautions** 

Methods and material for containment and cleaning up

**Methods for containment** Prevent further leakage or spillage if safe to do so.

Take up mechanically, placing in appropriate containers for disposal. Methods for cleaning up

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

Handle in accordance with good industrial hygiene and safety practice. Avoid contact with Advice on safe handling

skin, eyes or clothing. Do not eat, drink or smoke when using this product. Take off

contaminated clothing and wash before reuse.

Conditions for safe storage, including any incompatibilities

Keep containers tightly closed in a dry, cool and well-ventilated place. Protect from **Storage Conditions** 

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

This product, as supplied, does not contain any hazardous materials with occupational **Exposure Guidelines** 

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. Wear

breathing apparatus if exposed to vapors/dusts/aerosols.

**Hand Protection** Wear suitable gloves. Impervious 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.

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

Wear suitable protective clothing. Long sleeved clothing. Skin and body protection

**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.

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

Appearance crystalline Odor Odorless

Color white

Odor threshold No data available

<u>Property</u> <u>Values</u> <u>Remarks • Method</u>

Molecular weight No data available

pH No data available

Melting point / freezing point ~ 205 °C / 401 °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 2.00

Partition coefficient log K<sub>ow</sub> < 0.1

**Soil Organic Carbon-Water Partition** 

Coefficient

 $log K_{oc} < 0.7$ 

Autoignition temperature No data available

**Decomposition temperature**No data available

Dynamic viscosity Not applicable

Kinematic viscosity 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_	<u>Solubility</u>	Solubility Temperature_
Acid	Soluble	> 1000 mg/L	25 °C / 77 °F

## Other information

### **Metal Corrosivity**

Classified as corrosive to metal according to GHS criteria

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Steel Corrosion Rate Aluminum Corrosion Rate No data available No data available

## **Volatile Organic Compounds (VOC) Content**

Not applicable

Chemical name	CAS No	Volatile organic compounds (VOC) content	CAA (Clean Air Act)
Sulfamic acid	5329-14-6	Not applicable	-
Sodium chloride	7647-14-5	Not applicable	-

### **Explosive properties**

Upper explosion limitNo data availableLower explosion limitNo data available

Flammable properties

Flash point Not applicable

Flammability Limit in Air

Upper flammability limit:No data availableLower flammability limit: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**

None under normal processing.

#### Conditions to avoid

Exposure to air or moisture over prolonged periods.

## Incompatible materials

Oxidizing agent. Strong acids. Strong bases.

## **Hazardous decomposition products**

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

## 11. TOXICOLOGICAL INFORMATION

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## Information on likely routes of exposure

## **Product Information**

**Inhalation** May cause irritation of respiratory tract.

**Eye contact** Irritating to eyes. Causes serious eye irritation.

**Skin contact** Causes skin irritation.

Ingestion Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea. Harmful if

swallowed.

**Symptoms** Redness. May cause redness and tearing of the eyes.

Acute toxicity

Harmful if swallowed

**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
Sulfamic acid (80 - 90%) CAS#: 5329-14-6	Rat LD <sub>50</sub>	1450 mg/kg	None reported	None reported	IUCLID
Sodium chloride (20 - 30%) CAS#: 7647-14-5	Rat LD₅o	3000 mg/kg	None reported	None reported	IUCLID

### **Unknown Acute Toxicity**

80% 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)	1,617.10 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

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

#### **Mixture**

No data available.

### Ingredient Skin Corrosion/Irritation Data

Test data reported below.

Chemical name	Test method	Species	Reported	Exposure	Results	Key literature
			dose	time		references and

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						sources for data
Sulfamic acid (80 - 90%) CAS#: 5329-14-6	Standard Draize Test	Human	40 mg	5 days	Mild skin irritant	RTECS
Sodium chloride (20 - 30%) CAS#: 7647-14-5	Standard Draize Test	Rabbit	500 mg	24 hours	Mild skin irritant	RTECS

### 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
Sulfamic acid (80 - 90%) CAS#: 5329-14-6	Standard Draize Test	Rabbit	20 mg	None reported	Eye irritant	RTECS
Sodium chloride (20 - 30%) CAS#: 7647-14-5	Standard Draize Test	Rabbit	100 mg	None reported	Mild eye irritant	RTECS

### Respiratory or skin sensitization

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

### **Mixture**

No data available.

### **Ingredient Sensitization Data**

No data available.

### 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
Sulfamic acid (80 - 90%) CAS#: 5329-14-6	Rat NOAEL	1000 mg/kg	90 days	No toxicological effects observed	ECHA

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## 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
Sulfamic acid	5329-14-6	-	-	-	-
Sodium chloride	7647-14-5	-	-	-	-

## 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

Test data reported below.

#### **Oral Exposure Route**

Chemical name	Test	Species	Reported dose	Exposure time	Results	Key literature references and sources for data
Sulfamic acid (80 - 90%) CAS#: 5329-14-6	Micronucleus test	Mouse	None reported	None reported	Negative test result for mutagenicity	NITE

### 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
Sulfamic acid	Rat	200 mg/kg	None reported	No reproductive or	ECHA
(80 - 90%)	NOAEL			developmental toxic effects	
CAS#: 5329-14-6				observed	

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## **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.

**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
Sulfamic acid (80 - 90%) CAS#: 5329-14-6	96 hours	Pimephales promelas	LC50	42.2 mg/L	ERMA

## Crustacea

Chemical name	Exposure time	Species	Endpoint type	Reported dose	Key literature references and sources for data
Sulfamic acid (80 - 90%) CAS#: 5329-14-6	48 Hours	Daphina magna	EC50	71.6 mg/L	ECHA

## Algae

Chemical name	Exposure time	Species	Endpoint type	Reported dose	Key literature references and sources for data
Sulfamic acid (80 - 90%) CAS#: 5329-14-6	72 Hours	Selenastrum capricornutum	EC50	48 mg/L	ECHA

### **Aquatic Chronic Toxicity**

No data available.

### Persistence and degradability

Mixture

No data available.

Bioaccumulation

MATERIAL DOES NOT BIOACCUMULATE

**Mixture** 

No data available.

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 $log K_{ow} < 0.1$ Partition coefficient

**Mobility** 

**Soil Organic Carbon-Water Partition Coefficient**  $log K_{oc} < 0.7$ 

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.

**US EPA Waste Number** D002

Special instructions for disposal If permitted by regulation. Work in an approved fume hood. Dilute to 3 to 5 times the volume

with cold water. 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. Check with national, local municipal and state authorities and waste contractors for pertinent local information on

the disposal of this article.

## 14. TRANSPORT INFORMATION

DOT

UN/ID no UN2967

Proper shipping name Sulphamic Acid Mixture

Transport hazard class(es) 8 Ш **Packing Group Emergency Response Guide** 

Number

154

TDG

UN/ID no

Sulphamic Acid Mixture Proper shipping name

Transport hazard class(es) 8 **Packing Group** Ш

IATA

UN2967 **UN** number or ID number

Proper shipping name Sulphamic Acid Mixture

Transport hazard class(es) 8 Packing group Ш **ERG Code** 154

**IMDG** 

**UN** number or ID number UN2967

Proper shipping name Sulphamic Acid Mixture

Transport hazard class(es) **Packing Group** Ш

No special precautions necessary. Note:

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#### **Additional information**

There is a possibility that this product could be contained in a reagent set or kit composed of various compatible dangerous goods. If the item is not in a reagent set or kit, the classification given above applies.

If the item is part of a reagent set or kit the classification would change to the following:

UN3316 Chemical Kit, Hazard Class 9, Packing Group II or III.

If the item is not regulated, the Chemical Kit classification does not apply.

#### 15. REGULATORY INFORMATION

**National Inventories** 

TSCA Complies DSL/NDSL Complies

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

#### **International Inventories**

**EINECS/ELINCS** Complies Complies **ENCS IECSC** Complies **KECL - Existing substances** Complies Complies **PICCS** Complies **TCSI AICS** Complies Complies **NZIoC** 

**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 hazardYesChronic Health HazardYesFire hazardNoSudden release of pressure hazardNoReactive HazardNo

### **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

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This product does not contain any Proposition 65 chemicals

IMERC: Not applicable

#### U.S. State Right-to-Know Regulations

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

Chemical name	New Jersey	Massachusetts	Pennsylvania
Sulfamic acid	X	-	-
5329-14-6			

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

Chemical name	FIFRA	FDA
Sulfamic acid	-	21 CFR 186.1093
Sodium chloride	180.0950	21 CFR 182.70,21 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)

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 -
		-	-	x
				- I

### 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 (Chemical Carcinogenesis Research Information System) CCRIS 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 (European Environment Agency) EEA **EPA** EPA (Environmental Protection Agency)

**ERMA** ERMA (New Zealands Environmental Risk Management Authority)

**ECOSARS** Estimation through ECOSARS v1.11 part of the Estimation Programs Interface (EPI) Suite™

**FDA** FDA (Food & Drug Administration)

GESTIS (Information System on Hazardous Substances of the German Social Accident **GESTIS** 

Insurance)

HSDB (Hazardous Substances Data Bank) **HSDB** 

INERIS (The National Industrial Environment and Risks Institute) **INERIS** IPCS INCHEM (International Programme on Chemical Safety) **IPCS INCHEM IUCLID** IUCLID (The International Uniform Chemical Information Database) NITE Japan National Institute of Technology and Evaluation (NITE)

NIH NIH (National Institutes of Health)

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NIOSH NIOSH (National Institute for Occupational Safety and Health)
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 (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

SYKE The Finnish Environment Institute (SYKE)
USDA USDA (United States Department of Agriculture)
USDC 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\* Skin designation SKN+ Skin sensitization
RSP+ Respiratory sensitization \*\* Hazard Designation
C Carcinogen R Reproductive toxicant

M mutagen

Prepared By Hach Product Compliance Department

**Issue Date** 17-10-2019

Revision Date 08-Feb-2023

Revision Note 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** 

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