



SAFETY DATA SHEET

Be Right™

Revision Date 22-Oct-2024

Version 3.2

Section 1: Identification

Product identifier

Product Name Ultra Low Range Chlorine Buffer

Safety data sheet number M01228

Other means of identification

Pure substance/mixture Mixture

Recommended use of the chemical and restrictions on use

Recommended Use Buffer Water Analysis

Uses advised against No information available

Manufacturer or supplier details

Manufacturer Address

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

For further information, please contact

Emergency telephone number

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

Section 2: Hazard identification

Classification of the substance or mixture

Classification

Specific target organ toxicity (repeated exposure)	Category 1 - (H372)
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Label elements



Signal word
Danger

Hazard statements

H372 - Causes damage to organs through prolonged or repeated exposure.

Precautionary statements

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

P264 - Wash face, hands and any exposed skin thoroughly after handling.

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

P314 - Get medical advice/attention if you feel unwell.

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

Unknown aquatic toxicity Contains 0 % of components with unknown hazards to the aquatic environment.

Other Hazards Known

Other hazards No information available.

Section 3: Composition/information on ingredients**Substance**

Not applicable

Mixture

Chemical name	CAS No.	Weight-%
Potassium iodide (KI)	7681-11-0	<10%

Section 4: First-aid measures**Description of necessary first aid measures**

Inhalation Remove to fresh air.

Eye contact Rinse thoroughly with plenty of water for at least 15 minutes, lifting lower and upper eyelids. Consult a physician.

Skin contact Wash skin with soap and water. In the case of skin irritation or allergic reactions see a physician.

Ingestion Rinse mouth.

Most important symptoms/effects, acute and delayed

Symptoms No information available.

Effects of Exposure Causes damage to organs through prolonged or repeated exposure.

Indication of immediate medical attention and special treatment needed, if necessary

Note to physicians Treat symptomatically.

Section 5: Fire-fighting measures

Extinguishing media

Suitable extinguishing media Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Unsuitable extinguishing media Do not scatter spilled material with high pressure water streams.

Specific hazards arising from the chemical

Specific hazards arising from the chemical No information available.

Hazardous combustion products Sodium monoxide. Phosphorus oxides. Potassium oxides. Iodine compounds.

Special protective equipment and precautions for fire-fighters

Special protective equipment and precautions for fire-fighters Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear. Use personal protection equipment.

Section 6: Accidental release measures

Personal precautions, protective equipment and emergency procedures

Personal precautions Ensure adequate ventilation.

For emergency responders Use personal protection recommended in Section 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 Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust). Take up mechanically, placing in appropriate containers for disposal.

Prevention of secondary hazards Clean contaminated objects and areas thoroughly observing environmental regulations.

Section 7: Handling and storage

Precautions for safe handling

Advice on safe handling Ensure adequate ventilation.

General hygiene considerations Wash hands before breaks and immediately after handling the product.

Conditions for safe storage, including any incompatibilities

Storage Conditions Keep container tightly closed in a dry and well-ventilated place.

Section 8: Exposure controls/personal protection

Control parameters

Occupational exposure limits

Chemical name	Singapore	ACGIH TLV
Potassium iodide (KI) 7681-11-0		TWA: 0.01 mg/m ³ I inhalable particulate matter Sk*

Biological occupational exposure limits This product, as supplied, does not contain any hazardous materials with biological limits established by the region specific regulatory bodies.

Appropriate engineering controls

Engineering controls No information available.

Personal protection

Eye/face protection Appropriate eye/face protection should be selected and used according to the chemical nature, hazards and use of this product and safety requirements of the local jurisdiction.

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

Gloves			
Duration of contact	PPE - Glove material	Glove thickness	Break through time
Long term (repeated)	Wear protective Viton™ gloves	0,70 mm	>480 minutes
Short term	Wear protective nitrile rubber gloves	0,20 mm	>30 minutes

Skin and body protection Avoid contact with eyes, skin and clothing.

Respiratory protection Appropriate respiratory protection should be selected and used according to the chemical nature, hazards and use of this product and safety requirements of the local jurisdiction. If exposure limits are exceeded or irritation is experienced, ventilation and evacuation may be required.

Section 9: Physical and chemical properties

Information on basic physical and chemical properties

Physical state	Liquid	Color	colorless or clear
Appearance	aqueous solution	Odor threshold	No data available
Odor	Odorless		

<u>Property</u>	<u>Values</u>	<u>Remarks • Method</u>
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Molecular weight	No data available	
pH	8.3	@ 20 °C
Melting point / freezing point	~ -12 °C / 10.4 °F	
Initial boiling point and boiling range	99 °C / 210.2 °F	
Evaporation rate	No data available	
Vapor pressure	22.802 mm Hg / 3.04 kPa at 25 °C / 77 °F	
Relative vapor density	0.62	
Specific gravity - VALUE 1	1.300	
Partition coefficient	Not applicable	
Soil Organic Carbon-Water Partition Coefficient	Not applicable	
Autoignition temperature	No data available	
Decomposition temperature	No data available	
Dynamic viscosity	No data available	
Kinematic viscosity	No data available	

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	Soluble	> 1000 mg/L	25 °C / 77 °F

Other information**Corrosive to metals**

Steel Corrosion Rate	0.2 mm/yr / 0.01 in/yr
Aluminum Corrosion Rate	5.13 mm/yr / 0.2 in/yr

Volatile Organic Compounds (VOC) Content

Chemical name	CAS No.	Volatile organic compounds (VOC) content	CAA (Clean Air Act)
Potassium iodide (KI)	7681-11-0	Not applicable	-

Explosive properties

Upper explosion limit	No data available
Lower explosion limit	No data available

Flammable properties

Flash point	> 100 °C / 212 °F
Method	OC (open cup)

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

Section 10: Stability and reactivity**Reactivity**

Reactivity	No information available.
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Chemical stability

Stability	Stable under normal conditions.
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Explosion data

Sensitivity to mechanical impact	None.
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Sensitivity to static discharge	None.
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Possibility of hazardous reactions

Possibility of hazardous reactions	None under normal processing.
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<u>Conditions to avoid</u>	None known based on information supplied.
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<u>Incompatible materials</u>	None known based on information supplied.
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<u>Hazardous Decomposition Products</u>	Sodium monoxide. Phosphorus oxides. Potassium oxide. Iodine compounds.
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Section 11: Toxicological information**Toxicological information****Information on likely routes of exposure****Product Information**

Inhalation	Specific test data for the substance or mixture is not available.
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Eye contact	Specific test data for the substance or mixture is not available.
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Skin contact	Specific test data for the substance or mixture is not available.
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Ingestion	Specific test data for the substance or mixture is not available.
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Symptoms related to the physical, chemical and toxicological characteristics

Symptoms	No information available.
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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
Potassium iodide (KI) (<10%) CAS#: 7681-11-0	Rat LD ₅₀	2779 mg/kg	None reported	None reported	RTECS

Numerical measures of toxicity

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

Delayed and immediate effects as well as chronic effects from short and long-term exposure**Skin corrosion/irritation**

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

Mixture

No data available.

Ingredient Skin Corrosion/Irritation Data

No data available.

Serious eye damage/eye irritation

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

Mixture

No data available.

Ingredient Eye Damage/Eye Irritation Data

No data available.

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
Potassium iodide (KI) (<10%) CAS#: 7681-11-0	Patch test	Human	Not confirmed to be a skin sensitizer	ERMA

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

Test data reported below.

Oral Exposure Route**STOT - repeated exposure**

Causes damage to organs through prolonged or repeated exposure.

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
Potassium iodide (KI) (<10%) CAS#: 7681-11-0	Rat NOAEL	0.5 mg/kg	90 days	None reported	ECHA

Carcinogenicity

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

Mixture

No data available.

Ingredient Carcinogenicity Data

No data 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
Potassium iodide (KI) (<10%) CAS#: 7681-11-0	Cytogenetic analysis	Rat ascites tumor	500 mg/kg	None reported	Positive test result for mutagenicity	RTECS

Mixture in vivo Data

No data available.

Substance in vivo 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
Potassium iodide (KI) (<10%) CAS#: 7681-11-0	Human TD _{Lo}	2700 mg/kg	39 weeks	Specific Developmental Abnormalities Endocrine System	RTECS

Aspiration hazard

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

Other adverse effects No information available.**Section 12: Ecological information****Toxicity****Ecotoxicity**

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

Unknown aquatic toxicity

Contains 0 % of components with 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.

Aquatic Chronic Toxicity

No data available.

Persistence and degradability**Mixture**

No data available.

Bioaccumulation

Material does not bioaccumulate

Mixture

No data available.

Partition coefficient

Not applicable

Mobility**Soil Organic Carbon-Water Partition Coefficient**

Not applicable

Other adverse effects

No information available

Section 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.

Section 14: Transport information**Note:** No special precautions necessary.**IATA**

14.1 UN number or ID number	Not regulated
14.2	
14.3 Transport hazard class(es)	Not regulated
14.4 Packing group	Not regulated
14.5 Environmental hazards	Not applicable
14.6 Special precautions for user	
Special Provisions	None

IMDG

14.1 UN number or ID number	Not regulated
14.2	
14.3 Transport hazard class(es)	Not regulated
14.4 Packing Group	Not regulated
14.5 Environmental hazards	Not applicable
14.6 Special precautions for user	
Special Provisions	None

14.7 Maritime transport in bulk according to IMO instruments No information available

Rail transport

14.1 UN/ID no Not regulated
 14.2
 14.3 Transport hazard class(es) Not regulated
 14.4 Packing Group Not regulated
 14.5 Environmental hazards Not applicable
 14.6 Special precautions for user
 Special Provisions None

Road transport

14.1 UN number or ID number Not regulated
 14.2
 14.3 Transport hazard class(es) Not regulated
 14.4 Packing Group Not regulated
 14.5 Environmental hazards Not applicable
 14.6 Special precautions for user
 Special Provisions None

Section 15: Regulatory information

Regulatory information

National regulations

Environmental Public Health Act

Dispose of waste product or used containers according to local regulations.

Hazardous Waste (Control of Export, Import and Transit) Act

It is the responsibility of the waste generator to determine the toxicity and physical properties of the material generated to determine the proper waste identification and disposal methods in compliance with applicable regulations. Take note that wastes may be subject to export, import, or transit controls pursuant to the Basel convention and/or local regulations implementing the Basel convention.

Workplace Safety and Health Act

Comply with the health and safety at work laws.

International Regulations

The Rotterdam Convention Not applicable

The Stockholm Convention on Persistent Organic Pollutants Not applicable

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

International Inventories

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

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

15.2. Chemical safety assessment

Chemical Safety Report No information available

Section 16: Other information

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

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

Legend - Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

TWA	TWA (time-weighted average)	STEL	STEL (Short Term Exposure Limit)
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
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Revision Note	No information available

Take note of Directive 98/24/EC on the protection of the health and safety of workers from the risks related to chemical agents at work

Disclaimer

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

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End of Safety Data Sheet