



Be Right™

SAFETY DATA SHEET

Issue Date 01-Mar-2021

Revision Date 24-Apr-2023

Version 1.1

1. IDENTIFICATION

Product identifier

Product Name Low Range Chlorine Standard Solution Ampule 25 - 30 mg/L as Cl₂

Other means of identification

Product Code(s) 2630020-CN

Safety data sheet number M01207

Recommended use of the chemical and restrictions on use

Recommended Use Standard solution

Uses advised against Consumer use

Details of the supplier of the safety data sheet

Initial Supplier Identifier

Hach Sales & Service LP. 3020 Gore Road, London, Ontario N5V 4T7 Canada Tel: 1-800-665-7635

Manufacturer Address

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

Emergency telephone number

Emergency Telephone Chemtrec 1-800-424-9300
CANUTEC 613-992-4624

2. HAZARD IDENTIFICATION

Classification

Not a dangerous substance or mixture according to the Globally Harmonized System (GHS)

Label elements

Hazard statements

Not a dangerous substance or mixture according to the Globally Harmonized System (GHS)

Unknown Acute Toxicity

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

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

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

0 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (dust/mist)
0 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (vapor)
0 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (gas)

Other Hazards Known
Not applicable.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance
Not applicable

Mixture

Chemical Family Mixture.
Chemical nature aqueous solution.

Chemical name	Synonyms	CAS No	Percent Range	CBI Protection	Units	HMIRA #
Sodium hypochlorite	Hypochlorous acid, sodium salt	7681-52-9	<0.01%	-	g	-
Potassium hydroxide	Caustic potash Potassium Hydroxide	1310-58-3	<0.01%	-	g	-

4. FIRST AID MEASURES

Description of first aid measures

General advice No hazards which require special first aid measures. Use first aid treatment according to the nature of the injury.

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.

Ingestion Clean mouth with water and drink afterwards plenty of water.

Most important symptoms and effects, both acute and delayed

Symptoms See Section 11 for additional Toxicological Information.

Indication of any immediate medical attention and special treatment needed

Note to physicians Treat symptomatically.

5. FIRE-FIGHTING MEASURES

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

Unsuitable Extinguishing Media Caution: Use of water spray when fighting fire may be inefficient.

Specific hazards arising from the chemical No information available.

Hazardous combustion products 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

Personal precautions, protective equipment and emergency procedures

WHMIS Notice Only persons properly qualified to respond to an emergency involving hazardous substances should respond to a spill involving chemicals. See Section 13, Special Instructions for disposal assistance.

Personal precautions Ensure adequate ventilation.

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.

7. HANDLING AND STORAGE

Precautions for safe handling

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

Conditions for safe storage, including any incompatibilities

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

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

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

Chemical name	Alberta OEL	British Columbia OEL	Manitoba OEL	New Brunswick OEL	New Foundland & Labrador OEL
Potassium hydroxide <0.01%	Ceiling: 2 mg/m ³	Ceiling: 2 mg/m ³	Ceiling: 2 mg/m ³	Ceiling: 2 mg/m ³	Ceiling: 2 mg/m ³

Chemical name	Northwest Territories OEL	Nova Scotia OEL	Nunavut OEL	Ontario TWA	Prince Edward Island OEL
Potassium hydroxide <0.01%	Ceiling: 2 mg/m ³	Ceiling: 2 mg/m ³	Ceiling: 2 mg/m ³	Ceiling: 2 mg/m ³	Ceiling: 2 mg/m ³

Chemical name	Quebec OEL	Saskatchewan OEL	Yukon OEL
Potassium hydroxide <0.01%	Ceiling: 2 mg/m ³	Ceiling: 2 mg/m ³	Ceiling: 2 mg/m ³

Chemical name	ACGIH TLV	OSHA PEL	NIOSH
Potassium hydroxide <0.01%	Ceiling: 2 mg/m ³	(vacated) Ceiling: 2 mg/m ³	Ceiling: 2 mg/m ³

Legend See section 16 for terms and abbreviations

Appropriate engineering controls

Engineering Controls Showers
 Eyewash stations
 Ventilation systems.

Individual protection measures, such as personal protective equipment

Respiratory protection No protective equipment is needed under normal use conditions. If exposure limits are exceeded or irritation is experienced, ventilation and evacuation may be required.

Hand Protection Wear suitable gloves.

Eye/face protection Wear safety glasses with side shields (or goggles).

Skin and body protection No special protective equipment required.

General Hygiene Considerations Handle in accordance with good industrial hygiene and safety practice.

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 Liquid
Appearance clear
Color colorless
Odor Odorless
Odor threshold Not applicable

<u>Property</u>	<u>Values</u>	<u>Remarks • Method</u>
Molecular weight	No data available	
pH	10.5	@ 20 °C
Melting point/freezing point	0 °C / 32 °F	
Initial boiling point and boiling range	100 °C / 212 °F	
Evaporation rate	1 (water = 1)	
Vapor pressure	24.002 mm Hg / 3.2 kPa at 25 °C / 77 °F	
Relative vapor density	0.62	
Specific gravity - VALUE 1	0.999	

Partition coefficient No data available
 Soil Organic Carbon-Water Partition Coefficient No data available
 Autoignition temperature No data available
 Decomposition temperature No data available
 Dynamic viscosity 1 cP (mPa s) at 20 °C / 68 °F
 Kinematic viscosity 1.001 cSt (mm²/s) at 20 °C / 68 °F

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
Acid	Soluble	> 1000 mg/L	25 °C / 77 °F
Most Polar Organic Solvents	Soluble	> 1000 mg/L	25 °C / 77 °F

Other information

Metal Corrosivity

Steel Corrosion Rate 0.18 mm/yr / 0.01 in/yr
 Aluminum Corrosion Rate 0 mm/yr / 0 in/yr

Volatile Organic Compounds (VOC) Content

Chemical name	CAS No	Volatile organic compounds (VOC) content	CAA (Clean Air Act)
Sodium hypochlorite	7681-52-9	Not applicable	-
Potassium hydroxide	1310-58-3	No data available	-

Explosive properties

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

Flammable properties

Flash point No data available

Flammability Limit in Air

Upper flammability limit: No data available
 Lower flammability limit: No data available

Oxidizing properties

No data available.

Bulk density

No data available

10. STABILITY AND REACTIVITY

Reactivity

Not applicable.

Chemical stability

Stability Stable under normal conditions.

Explosion data

Sensitivity to Mechanical Impact None

Sensitivity to Static Discharge None.

Possibility of hazardous reactions

Possibility of Hazardous Reactions None under normal processing.

Hazardous polymerization

Hazardous polymerization does not occur.

Conditions to avoid

Conditions to avoid None known based on information supplied.

Incompatible materials

Incompatible materials Strong oxidizing agents, strong acids, and strong bases.

Hazardous decomposition products

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

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Product Information

Inhalation No known effect based on information supplied.

Eye contact No known effect based on information supplied.

Skin contact No known effect based on information supplied.

Ingestion No known effect based on information supplied.

Symptoms No information available.

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 hydroxide (<0.01%) CAS#: 1310-58-3	Rat LD ₅₀	333 mg/kg	None reported	None reported	Vendor SDS

Unknown Acute Toxicity

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

- 0 % of the mixture consists of ingredient(s) of unknown acute oral toxicity
- 0 % of the mixture consists of ingredient(s) of unknown acute dermal toxicity
- 0 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (dust/mist)
- 0 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (vapor)
- 0 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (gas)

Acute Toxicity Estimations (ATE)

ATEmix (oral)	No information available
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

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

Mixture

No data available.

Ingredient Skin Corrosion/Irritation Data

Test data reported below.

Chemical name	Test method	Species	Reported dose	Exposure time	Results	Key literature references and sources for data
Potassium hydroxide (<0.01%) CAS#: 1310-58-3	Standard Draize Test	Human	50 mg	24 hours	Corrosive to skin	RTECS

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

Test data reported below.

Chemical name	Test method	Species	Reported dose	Exposure time	Results	Key literature references and sources for data
Potassium hydroxide (<0.01%) CAS#: 1310-58-3	Existing human experience	Human	None reported	None reported	Corrosive to eyes	ERMA

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
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				sources for data
Sodium hypochlorite (<0.01%) CAS#: 7681-52-9	OECD Test No. 406: Skin Sensitization	Guinea pig	Not confirmed to be a skin sensitizer	ECHA
Potassium hydroxide (<0.01%) CAS#: 1310-58-3	Intracutaneous Test	Guinea pig	Not confirmed to be a skin sensitizer	IUCLID

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

Chemical name	Endpoint type	Reported dose	Exposure time	Toxicological effects	Key literature references and sources for data
Sodium hypochlorite (<0.01%) CAS#: 7681-52-9	Human TD _{Lo}	1000 mg/kg	None reported	Behavioral Somnolence (general depressed activity) Vascular BP lowering not characterized in autonomic section Skin and Appendages Corrosive to skin after topical application	RTECS

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 hypochlorite (<0.01%) CAS#: 7681-52-9	Rat TD _{Lo}	140 mg/kg	63 days	Endocrine Changes in spleen weight Immunological Including Allergic Decrease in cellular immune response Biochemical Intermediary metabolism (lipids including transport)	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 hypochlorite	7681-52-9	-	Group 3	-	-
Potassium hydroxide	1310-58-3	-	-	-	-

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

Test data reported below.

Chemical name	Test	Cell Strain	Reported dose	Exposure time	Results	Key literature references and sources for data
Sodium hypochlorite (<0.01%) CAS#: 7681-52-9	Cytogenetic analysis	Human lymphocyte	100 mg/L	24 hours	Positive test result for mutagenicity	RTECS
Potassium hydroxide (<0.01%) CAS#: 1310-58-3	Cytogenetic analysis	Rat ascites tumor	1800 mg/kg	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 hypochlorite (<0.01%) CAS#: 7681-52-9	Rat NOAEL	>= 5 mg/kg	Single generation	No reproductive or developmental toxic effects observed	ECHA

Aspiration hazard

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

12. ECOLOGICAL INFORMATION

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

Unknown Acute Toxicity 0 % of the mixture consists of component(s) of unknown hazards to the aquatic environment.

Mixture

Aquatic Acute Toxicity
 No data available.

Aquatic Chronic Toxicity
 No data available.

Substance

Aquatic Acute Toxicity
 Test data reported below.

Fish

Chemical name	Exposure time	Species	Endpoint type	Reported dose	Key literature references and sources for data
Sodium hypochlorite (<0.01%) CAS#: 7681-52-9	96 hours	<i>Clupea pallasii</i>	LC ₅₀	0.065 mg/L	Vendor SDS
Potassium hydroxide (<0.01%) CAS#: 1310-58-3	96 hours	<i>Gambusia affinis</i>	LC ₅₀	80 mg/L	ERMA

Crustacea

Chemical name	Exposure time	Species	Endpoint type	Reported dose	Key literature references and sources for data
Sodium hypochlorite (<0.01%) CAS#: 7681-52-9	48 Hours	<i>Daphnia magna</i>	LC ₅₀	0.032 mg/L	Vendor SDS

Algae

Chemical name	Exposure time	Species	Endpoint type	Reported dose	Key literature references and sources for data
Sodium hypochlorite (<0.01%) CAS#: 7681-52-9	72 Hours	<i>Pseudokirchnerella subcapitata</i>	EC ₅₀	0.05 mg/L	ECHA

Aquatic Chronic Toxicity
 Test data reported below.

Fish

Chemical name	Exposure time	Species	Endpoint type	Reported dose	Key literature references and sources for data
Sodium hypochlorite (<0.01%) CAS#: 7681-52-9	28 days	<i>Menidia peninsulae</i>	NOEC	0.04 mg/L	ECHA

Crustacea

Chemical name	Exposure time	Species	Endpoint type	Reported dose	Key literature references and sources for data
Sodium hypochlorite	15 days	<i>Crassostrea virginica</i>	NOEC	0.007 mg/L	ECHA

(<0.01%) CAS#: 7681-52-9					
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Algae

Chemical name	Exposure time	Species	Endpoint type	Reported dose	Key literature references and sources for data
Sodium hypochlorite (<0.01%) CAS#: 7681-52-9	7 days	None reported	NOEC	0.0021 mg/L	ECHA

Persistence and degradability

Mixture

No data available.

Mixture

No data available.

Partition coefficient

No data available

Mobility

Soil Organic Carbon-Water Partition Coefficient

No data available

Other adverse effects

No information available

13. DISPOSAL CONSIDERATIONS

Waste treatment methods

Waste from residues/unused products

Dispose of in accordance with local regulations. Dispose of waste in accordance with environmental legislation.

Contaminated packaging

Do not reuse empty containers.

14. TRANSPORT INFORMATION

Transport Canada

TDG

Not regulated

IATA

Not regulated

ERG Code

8L

Special precautions for user

A3, A803

IMDG

Not regulated

Note:

No special precautions necessary.

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

Regulatory information

National Inventories

DSL/NDSL Complies

DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List

International Inventories

TSCA Complies

EINECS/ELINCS Complies

ENCS Complies

IECSC Complies

KECL - Existing substances Complies

PICCS Complies

TCSI Complies

AICS Complies

NZIoC Complies

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory

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

Canada - CEPA - Mercury Containing Products

None

International Regulations

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

The Stockholm Convention on Persistent Organic Pollutants Not applicable

The Rotterdam Convention Not applicable

16. OTHER INFORMATION

Special Comments

None

NFPA and HMIS Classifications

NFPA	Health hazards - 0	Flammability - 0	Instability - 0	Physical and chemical properties -
HMIS	Health hazards - 0	Flammability - 0	Physical hazards - 0	Personal protection - X

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

ACGIH ACGIH (American Conference of Governmental Industrial Hygienists)
 ATSDR ATSDR (Agency for Toxic Substances and Disease Registry)

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

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 01-Mar-2021

Revision Date 24-Apr-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.

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End of Safety Data Sheet