

SAFETY DATA SHEET

Issue Date 17-02-2016 **Revision Date** 26-Jan-2024 **Version** 3.3 **Page** 1 / 14

1. IDENTIFICATION

Product identifier

Product Name Chlorine Dosing Solution Ampule 1000 - 1500 mg/l

Other means of identification

Product Code(s) 2504810

Safety data sheet number M02588

Recommended use of the chemical and restrictions on use

Recommended Use Standard solution. Water Analysis.

Uses advised against Consumer use.

Restrictions on use For 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 not considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Chronic aquatic toxicity Category 3

Hazards not otherwise classified (HNOC)

Not applicable

Label elements

Signal word

None

Hazard statements

The product contains no substances which at their given concentration, are considered to be hazardous to health

H412 - Harmful to aquatic life with long lasting effects

Precautionary statements

P273 - Avoid release to the environment

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

EN / AGHS Page 1/14

mg/

Revision Date 26-Jan-2024

Page 2/14

Other Hazards Known
Causes mild skin irritation
Harmful to aquatic life

Issue Date 17-02-2016

3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance

Version 3.3

Not applicable

Mixture

Chemical Family Mixture.

Chemical nature Aqueous solution of inorganic acid.

Percent ranges are used where confidential product information is applicable.

Chemical name	CAS No	Percent Range	HMRIC #
Sodium hypochlorite	7681-52-9	<1%	-

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

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 No information available.

Special protective equipment for

fire-fighters

Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear.

Use personal protection equipment.

EN / AGHS Page 2/14

mg/l

Revision Date 26-Jan-2024

Version 3.3 Page 3/14

6. ACCIDENTAL RELEASE MEASURES

U.S. NoticeOnly 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 Ensure adequate ventilation.

Environmental precautions

Issue Date 17-02-2016

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.

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.

Conditions for safe storage, including any incompatibilities

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

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. Technical measures and appropriate working operations should be given priority over the use of personal protective equipment. The type of protective equipment must be selected according to the concentration and amount of the dangerous

substance at the specific workplace.

EN / AGHS Page 3/14

mg/l

Issue Date 17-02-2016 Revision Date 26-Jan-2024

Version 3.3 Page 4/14

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. Ensure

adequate ventilation.

Hand Protection Wear suitable gloves. 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.

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

Skin and body protectionNo special protective equipment required. Avoid contact with eyes, skin and clothing. Wash

contaminated clothing before reuse.

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 aqueous solution Color colorless

Odor Chlorine Odor threshold No information available

Property Values Remarks • Method

Molecular weight No data available

pH 10.0 - 10.5 @ 20 °C

Melting point / freezing point $\sim 0 \, ^{\circ}\text{C} \, / \, 32 \, ^{\circ}\text{F}$

Initial boiling point and boiling range \sim 100 °C / 212 °F

Evaporation rate 0.23 (water = 1)

Vapor pressure 5.551 mm Hg / 0.74 kPa at 20 °C / 68 °F

Relative vapor density 0.03

Specific gravity - VALUE 1 1.02

Partition coefficient Not applicable

Soil Organic Carbon-Water Partition

Coefficient

Not applicable

Autoignition temperature No data available

Decomposition temperatureNo information available

Dynamic viscosityNo information available

Kinematic viscosity

No information available

EN / AGHS Page 4/14

Issue Date 17-02-2016

Version 3.3

Product Name Chlorine Dosing Solution Ampule 1000 - 1500

Revision Date 26-Jan-2024

Page 5/14

Solubility(ies)

Water solubility

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

Solubility in other solvents

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

Other information

Metal Corrosivity

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

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	-

Explosive properties

Not applicable **Upper explosion limit** Lower explosion limit Not applicable

Flammable properties

Flash point No data available

Flammability Limit in Air

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

No data available. **Oxidizing properties**

Not applicable **Bulk density**

10. STABILITY AND REACTIVITY

Reactivity

Not applicable.

Chemical stability

Stable under normal conditions.

Explosion data

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

EN / AGHS Page 5/14

Issue Date 17-02-2016

Version 3.3

Product Name Chlorine Dosing Solution Ampule 1000 - 1500

mg/l

Revision Date 26-Jan-2024

Page 6 / 14

Possibility of hazardous reactions

None under normal processing.

Hazardous polymerization

None under normal processing.

Conditions to avoid

None known based on information supplied.

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

No data available.

Unknown Acute Toxicity

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

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

No data available.

EN / AGHS Page 6/14

Issue Date 17-02-2016

Version 3.3

Product Name Chlorine Dosing Solution Ampule 1000 - 1500

mg/l

Revision Date 26-Jan-2024

Page 7 / 14

Serious eye damage/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
Sodium hypochlorite	OECD Test No.	Guinea pig	Not confirmed to be a skin sensitizer	ECHA
(<1%)	406: Skin			
CAS#: 7681-52-9	Sensitization			

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	Human	1000 mg/kg	None reported	Behavioral	RTECS
(<1%)	TDLo			Somnolence (general depressed	
CAS#: 7681-52-9				activity)	
				Vascular	
				BP lowering not characterized in	
				autonomic section	
				Skin and Appendages	
				Corrosive to skin after topical	
				application	

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

EN / AGHS Page 7/14

Issue Date 17-02-2016

Version 3.3

Product Name Chlorine Dosing Solution Ampule 1000 - 1500

mg/l

Revision Date 26-Jan-2024

Page 8 / 14

Chemical name	Endpoint type	Reported dose	Exposure time	Toxicological effects	Key literature references and sources for data
Sodium hypochlorite	Rat	140 mg/kg	63 days	Endocrine	RTECS
(<1%)	TD_Lo			Changes in spleen weight	
CAS#: 7681-52-9				Immunological Including	
				Allergic	
				Decrease in cellular immune	
				response	
				Biochemical	
				Intermediary metabolism (lipids	
				including transport)	

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	-	-

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 (<1%) CAS#: 7681-52-9	Cytogenetic analysis	Human lymphocyte	100 mg/L	24 hours	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

EN / AGHS Page 8/14

Issue Date 17-02-2016

Version 3.3

Product Name Chlorine Dosing Solution Ampule 1000 - 1500

mg/l

Revision Date 26-Jan-2024

Page 9/14

Test data reported below.

Oral Exposure Route

Chemical name	Endpoint	Reported	Exposure	Toxicological effects	Key literature references and
	type	dose	time		sources for data
Sodium hypochlorite	Rat	>= 5 mg/kg	Single	No reproductive or	ECHA
(<1%)	NOAEL		generation	developmental toxic effects	
CAS#: 7681-52-9			-	observed	

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
Sodium hypochlorite (<1%) CAS#: 7681-52-9	96 hours	Clupea pallasi	LC ₅₀	0.065 mg/L	Vendor SDS

Crustacea

Chemical name	Exposure time	Species	Endpoint type	Reported dose	Key literature references and sources for data
Sodium hypochlorite (<1%) CAS#: 7681-52-9	48 Hours	Daphnia magna	LC50	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 (<1%)		Pseudokirchnerella subcapitata	71.	0.05 mg/L	ECHA
CAS#: 7681-52-9					

Aquatic Chronic Toxicity

Test data reported below.

EN / AGHS Page 9/14

Issue Date 17-02-2016

Product Name Chlorine Dosing Solution Ampule 1000 - 1500

Revision Date 26-Jan-2024

Page 10 / 14

Version 3.3

Fish

Chemical name	Exposure time	Species	Endpoint type	Reported dose	Key literature references and sources for data
Sodium hypochlorite (<1%) CAS#: 7681-52-9	28 days	Menidia peninsulae	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 (<1%) CAS#: 7681-52-9	15 days	Crassostrea virginica	NOEC	0.007 mg/L	ECHA

Algae

Chemical name	Exposure time	Species	Endpoint type	Reported dose	Key literature references and sources for data
Sodium hypochlorite (<1%) 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 Not applicable

Mobility

Soil Organic Carbon-Water Partition Coefficient Not applicable

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

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 material to the drain. Allow cold water to run for 5 minutes to completely flush the system.

EN / AGHS Page 10/14

Issue Date 17-02-2016

Version 3.3

Product Name Chlorine Dosing Solution Ampule 1000 - 1500

mg/l

Revision Date 26-Jan-2024

Page 11 / 14

14. TRANSPORT INFORMATION

DOT Not regulated

TDG Not regulated

IATA Not regulated

IMDG Not regulated

Marine pollutant This material meets the definition of a marine pollutant

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 **ENCS** Complies Complies **IECSC** Complies **KECL PICCS** Complies **TCSI** Complies **AICS** Complies **NZIoC** Complies

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

ENCS - Japan Existing and New Chemical Substances

IECSC - China Inventory of Existing Chemical Substances

KECL - Korean Existing and Evaluated Chemical Substances

PICCS - Philippines Inventory of Chemicals and Chemical Substances

TCSI - Taiwan Chemical Substances Inventory

AICS - Australian Inventory of Chemical Substances

NZIoC - New Zealand Inventory of Chemicals

US Federal Regulations

SARA 313

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

SARA 311/312 Hazard Categories

Acute health hazardYesChronic Health HazardYesFire hazardNoSudden release of pressure hazardNoReactive HazardNo

EN / AGHS Page 11/14

Issue Date 17-02-2016

Version 3.3

Product Name Chlorine Dosing Solution Ampule 1000 - 1500

mg/l

Revision Date 26-Jan-2024

Page 12 / 14

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)

Chemical name	CWA - Reportable Quantities	CWA - Toxic Pollutants	CWA - Priority Pollutants	CWA - Hazardous Substances
Sodium hypochlorite 7681-52-9	100 lb	-	-	Х

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

Chemical name	Hazardous Substances RQs	CERCLA/SARA RQ	Reportable Quantity (RQ)
Sodium hypochlorite	100 lb	-	RQ 100 lb final RQ
7681-52-9			RQ 45.4 kg final RQ

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

Chemical name	New Jersey	Massachusetts	Pennsylvania
Sodium hypochlorite	X	X	X
7681-52-9			

U.S. EPA Label Information

Chemical name	FIFRA	FDA
Sodium hypochlorite	180.0940	-

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

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

EN / AGHS Page 12/14

mg/

Issue Date 17-02-2016 Revision Date 26-Jan-2024

Version 3.3 **Page** 13 / 14

ACGIH ACGIH (American Conference of Governmental Industrial Hygienists)

ATSDR ATSDR (Agency for Toxic Substances and Disease Registry)
CCRIS (Chemical Carcinogenesis Research Information System)

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

Insurance)

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 (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 (SÝKE)
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 17-02-2016

Revision Date 26-Jan-2024

Revision Note None

EN / AGHS Page 13/14

Issue Date 17-02-2016

Version 3.3

Product Name Chlorine Dosing Solution Ampule 1000 - 1500

mg/l

Revision Date 26-Jan-2024

Page 14/14

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.

HACH COMPANY©2023

End of Safety Data Sheet

EN / AGHS Page 14/14