

SAFETY DATA SHEET

Issue Date 22-Apr-2021

Revision Date 10-Aug-2021 Version 1.3

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1. IDENTIFICATION

<u>Product identifier</u> Product Name	5500sc Reagent 3 Ammonia Monochloramine
Other means of identification Product Code(s)	25236000
Safety data sheet number	M01707

Recommended use of the chemical and restrictions on use			
Recommended Use	Determination of free ammonia.		
Uses advised against	None.		
Restrictions on use	None.		

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)

Serious eye damage/eye irritation

Category 1

Hazards not otherwise classified (HNOC) Not applicable

Label elements

Signal word Danger



Hazard statements

H318 - Causes serious eye damage

Precautionary statements

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 P310 - Immediately call a POISON CENTER or doctor/physician

Other Hazards Known

Toxic to aquatic life

3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance

Not applicable

<u>Mixture</u>

Percent ranges are used where confidential product information is applicable.

Chemical name	CAS No	Percent Range	HMRIC #
Sodium hypochlorite	7681-52-9	<1%	-
Sodium hydroxide	1310-73-2	<0.1%	-

4. FIRST AID MEASURES

Description of first aid measures

General advice	Immediate medical attention is required. Show this safety data sheet to the doctor in attendance.	
Inhalation	Remove to fresh air. Get medical attention immediately if symptoms occur.	
Eye contact	Get immediate medical advice/attention. 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.	
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

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

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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 ed	quipment and emergency procedures	
Personal precautions	Avoid contact with skin, eyes or clothing. Use personal protective equipment as required.	
Other Information	Refer to protective measures listed in Sections 7 and 8.	
Environmental precautions		
Environmental precautions	Prevent further leakage or spillage if safe to do so.	
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	Pick up and transfer to properly labeled containers.	
Prevention of secondary hazards	Clean contaminated objects and areas thoroughly observing environmental regulations.	
Reference to other sections	See section 8 for more information. See section 13 for more information.	

7. HANDLING AND STORAGE

Precautions for safe handling	
Advice on safe handling	Handle in accordance with good industrial hygiene and safety practice. Avoid contact with skin, eyes or clothing. Do not eat, drink or smoke when using this product.
Conditions for safe storage, includ	ing any incompatibilities
Storage Conditions	Keep containers tightly closed in a dry, cool and well-ventilated place. Store locked up. Keep out of the reach of children.
Flammability class	Not applicable

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Exposure Guidelines

Chemical name	ACGIH TLV	OSHA PEL	NIOSH	
Sodium hydroxide	Ceiling: 2 mg/m ³	TWA: 2 mg/m ³	IDLH: 10 mg/m ³	
CAS#: 1310-73-2		(vacated) Ceiling: 2 mg/m ³	Ceiling: 2 mg/m ³	
Appropriate engineering controls	Shawara			
Engineering Controls	Showers Eyewash stations			
	Ventilation systems.			
	ventilation systems.			
Individual protection measures, suc	h as personal protective equi	pment		
Respiratory protection	No protective equipment is nee		ons. If exposure limits are	
	exceeded or irritation is experienced, ventilation and evacuation may be required.			
Hand Protection	Wear suitable gloves.			
Eye/face protection	Tight sealing safety goggles.			
Skin and body protection	Wear suitable protective clothing.			
General Hygiene Considerations	Avoid contact with skin, eyes o		s and eye/face protection. Do	
	not eat, drink or smoke when using this product.			
Environmental exposure controls	Local authorities should be adv	vised if significant spillages can	not be contained. Do not	
	allow into any sewer, on the gr			
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Thermal hazards	None under normal processing	J.		

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Physical state Appearance	aqueous solution clear	Liquid		Color	colorless
Odor	Odorless			Odor threshold	No data available
Property_			Values		Remarks • Method
Molecular weight	t		No data availal	ble	
рН			12.7		
Melting point/free	ezing point		~ 0 °C / 32 °F		
Boiling point / bo	oiling range		~ 100 °C / 212 °F		
Evaporation rate			1 (water = 1)		
Vapor pressure			23.702 mm Hg	/ 3.16 kPa at 2	5 °C / 77 °F
Relative vapor de	ensity		0.62		
Specific gravity (water = 1 / air = 1)		1.0200		
Partition Coeffici	ent (n-octanol/wate	er)	Not applicable		
Soil Organic Carl	bon-Water Partitio	ı	Not applicable		

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Coefficient Autoignition temperature	No data available
Decomposition temperature	No data available
Dynamic viscosity	No data available
Kinematic viscosity	No data available

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
Acids	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	-
Sodium hydroxide	1310-73-2	No data available	-

Explosive properties

Upper explosion limit Lower explosion limit	No data available No data available
Flammable properties	
Flash point	No data available
Flammability Limit in Air Upper flammability limit: Lower flammability limit:	No data available No data available
Oxidizing properties	No data available.
Bulk density	No data available

10. STABILITY AND REACTIVITY

Reactivity Not applicable.

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

None known based on information supplied.

Incompatible materials

Strong acids. Strong bases. Strong oxidizing agents.

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	Specific test data for the substance or mixture is not available.
Eye contact	Specific test data for the substance or mixture is not available. Severely irritating to eyes. Causes serious eye damage. May cause burns. May cause irreversible damage to eyes.
Skin contact	Specific test data for the substance or mixture is not available. May cause irritation.
Ingestion	Specific test data for the substance or mixture is not available. Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea.
Symptoms	Redness. Burning. May cause blindness.

Acute toxicity

Based on available data, the classification criteria are not met

Product Acute Toxicity Data

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

May cause skin irritation.

Product Skin Corrosion/Irritation Data

No data available.

Ingredient Skin Corrosion/Irritation Data

No data available.

Chemical name	Test method	Species	Reported dose	Exposure time	Results	Key literature references and sources for data
Sodium hydroxide (<0.1%) CAS#: 1310-73-2	Patch test	Human	20 mg	24 hours	Corrosive to skin	RTECS (Registry of Toxic Effects of Chemical Substances)

Serious eye damage/irritation

Classification based on data available for ingredients. Causes burns. Risk of serious damage to eyes.

Product Serious Eye Damage/Eye Irritation Data

No data available.

Ingredient Eye Damage/Eye Irritation Data

No data available.

Chemical name	Test method	Species	Reported dose	Exposure time	Results	Key literature references and sources for data		
Sodium hydroxide (<0.1%) CAS#: 1310-73-2	Standard Draize Test	Rabbit	0.05 mg	24 hours	Corrosive to eyes	RTECS (Registry of Toxic Effects of Chemical Substances)		
Respiratory or skin s	Respiratory or skin sensitization							

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

Product Sensitization Data

No data available.

Ingredient Sensitization Data

No data available.

Chemical name	Test method	Species	Results	Key literature references and sources for data
Sodium hypochlorite (<1%)	OECD Test No. 406: Skin	Guinea pig	Not confirmed to be a skin sensitizer	ECHA (The European Chemicals Agency)
CAS#: 7681-52-9	Sensitization			0 11

STOT - single exposure

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

Product Specific Target Organ Toxicity Single Exposure Data No data available.

Ingredient Specific Target Organ Toxicity Single Exposure Data No data available.

Chemical name	Endpoint type	Reported dose	Exposure time	Toxicological effects	Key literature references and sources for data
Sodium hypochlorite	Human	1000 mg/kg	None	Behavioral	RTECS (Registry of Toxic

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(<1%)	TDLo	reported	Somnolence (general	Effects of Chemical
CAS#: 7681-52-9			depressed activity)	Substances)
			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.

Product Specific Target Organ Toxicity Repeat Dose Data No data available.

Ingredient Specific Target Organ Toxicity Repeat Exposure Data

No data available.

Chemical name	Endpoint type	Reported dose	Exposure time	Toxicological effects	Key literature references and sources for data
Sodium hypochlorite (<1%) CAS#: 7681-52-9	Rat TD⊾₀	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 (Registry of Toxic Effects of Chemical Substances)

Carcinogenicity

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

Product Carcinogenicity Data

No data available.

Ingredient Carcinogenicity Data

No data available.

Chemical name	CAS No	ACGIH	IARC	NTP	OSHA
Sodium hypochlorite	7681-52-9	-	Group 3	-	-
Sodium hydroxide	1310-73-2	-	-	-	-

Legend

ACGIH (American Conference of Governmental Industrial Hygienists)	Does not apply
IARC (International Agency for Research on Cancer)	Group 3 - Not classifiable as a human
	carcinogen
NTP (National Toxicology Program)	Does not apply
OSHA (Occupational Safety and Health Administration of the US Department of	Does not apply
Labor)	

Germ cell mutagenicity

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

Product Germ Cell Mutagenicity invitro Data

No data available.

Ingredient Germ Cell Mutagenicity invitro Data

No data available.

Chemical name	Test	Cell Strain	Reported	Exposure	Results	Key literature

			dose	time		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 (Registry of Toxic Effects of Chemical Substances)

Product Germ Cell Mutagenicity invivo Data

No data available.

Ingredient Germ Cell Mutagenicity invivo Data

No data available.

Reproductive toxicity

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

Product Reproductive Toxicity Data

No data available.

Ingredient Reproductive Toxicity Data

No data available.

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

Aspiration hazard

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

12. ECOLOGICAL INFORMATION

Ecotoxicity

Unknown aquatic toxicity

 $0\ \%$ of the mixture consists of component(s) of unknown hazards to the aquatic environment.

Product Ecological Data

Aquatic Acute Toxicity No data available.

Aquatic Chronic Toxicity No data available.

Ingredient Ecological Data

Aquatic Acute Toxicity No data available.

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
Sodium hydroxide (<0.1%) CAS#: 1310-73-2	96 hours	Oncorhynchus mykiss	LC ₅₀	45.4 mg/L	IUCLID (The International Uniform Chemical Information Database)
Chemical name	Exposure time	Species	Endpoint type	Reported dose	Key literature references and sources for data
Sodium hypochlorite	48 Hours	Daphnia magna	LC ₅₀	0.032 mg/L	Vendor SDS

(<1%) CAS#: 7681-52-9					
Sodium hydroxide (<0.1%) CAS#: 1310-73-2	48 Hours	Daphnia sp.	EC ₅₀	40.4 mg/L	IUCLID (The International Uniform Chemical Information Database)
Chemical name	Experies	Species	Endnaint	Reported	Koy literature references and
	Exposure time	Species	Endpoint type	dose	Key literature references and sources for data

Aquatic Chronic Toxicity

No data available.

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 (The European Chemicals Agency)
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 (The European Chemicals Agency)
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 (The European Chemicals Agency)

Persistence and degradability

Product Biodegradability Data

No data available.

Product Bioaccumulation Data No data available.

Partition Coefficient (n-octanol/water)

<u>Mobility</u>

Soil Organic Carbon-Water Partition Coefficient

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

Not applicable

Not applicable

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Special instructions for disposal Check with local municipal and state authorities and waste contractors for pertinent local information regarding the proper disposal of chemicals. Dispose of material in an E.P.A. approved hazardous waste facility.

14. TRANSPORT INFORMATION

DOT Emergency Response Guide Number	Not regulated 154
TDG	Not regulated
IATA ERG Code	Not regulated 154
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

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
IECSC	Complies
KECL - Existing substances	Complies
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

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SARA 311/312 Hazard Categories

Acute health hazard	Yes
Chronic Health Hazard	Yes
Fire hazard	No
Sudden release of pressure hazard	No
Reactive Hazard	No

CWA (Clean Water Act)

This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42)

Chemical name	CWA - Reportable Quantities	CWA - Toxic Pollutants	CWA - Priority Pollutants	CWA - Hazardous Substances
Sodium hypochlorite 7681-52-9	100 lb	-	-	Х
Sodium hydroxide 1310-73-2	1000 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
Sodium hydroxide	1000 lb	-	RQ 1000 lb final RQ
1310-73-2			RQ 454 kg final RQ
US State Regulations			-

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California Proposition 65

This product does not contain any Proposition 65 chemicals

U.S. State Right-to-Know Regulations

This product does not contain any substances regulated by state right-to-know regulations.

Chemical name	New Jersey	Massachusetts	Pennsylvania
Sodium hypochlorite 7681-52-9	Х	X	Х
Sodium hydroxide 1310-73-2	Х	Х	Х

U.S. EPA Label Information

Chemical name	FIFRA	FDA
Sodium hypochlorite	180.0940	-
Sodium hydroxide	180.0910	21 CFR 184.1763

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
				- 1

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

NIOSH IDLH ACGIH NDF		Immediately Dangerous to Life or Health ACGIH (American Conference of Governmental Industrial Hygienists) no data		
Legend - Section	n 8: EXPOSURE CONTROLS/PERSON			
TWA	TWA (time-weighted average)	STEL	STEL (Short Term Exposure Limit)	
MAC	Maximum Allowable Concentration	Ceiling	Ceiling Limit Value	
Х	Listed	Vacated	These values have no official status. The only binding levels of contaminants are those listed in the final OSHA PEL. These lists are for reference purposes only. Please note that some reference state regulations of these "liberated" exposure limits in their state regulations.	
SKN* RSP+ C M	Skin designation Respiratory sensitization Carcinogen mutagen	SKN+ ** R	Skin sensitization Hazard Designation Reproductive toxicant	
Prepared By	Hach Product Cor	npliance Department		
Issue Date	22-Apr-2021			
Revision Date	10-Aug-2021			

Disclaimer

Revision Note

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.

SDS sections updated

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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