

Safety Data Sheet

Issue Date: 27-Feb-2001

Revision Date: 02-Sep-2015

Version 1

1. IDENTIFICATION

Product Identifier

Product Name Aqua Chlor

Other means of identification

SDS # AQS-044

Recommended use of the chemical and restrictions on use

Recommended Use Not determined.

Details of the supplier of the safety data sheet

Supplier Address

Aqua Systems, Inc.
P.O. Box. 397
Arroyo Grande, CA 93420
Ph: 805-489-9250

Emergency Telephone Number

Emergency Telephone (24 hr) INFOTRAC 1-352-323-3500 (International)
1-800-535-5053 (North America)

2. HAZARDS IDENTIFICATION

Odor Chlorine

Appearance Clear pale yellow liquid

Physical State Liquid

Classification

Skin corrosion/irritation	Category 1 Sub-category B
Serious eye damage/eye irritation	Category 1

Signal Word

Danger

Hazard Statements

Causes severe skin burns and eye damage



Precautionary Statements - Prevention

Do not breathe dust/fume/gas/mist/vapors/spray
 Wash face, hands and any exposed skin thoroughly after handling
 Wear protective gloves/protective clothing/eye protection/face protection

Precautionary Statements - Response

Immediately call a poison center or doctor/physician

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
 Immediately call a poison center or doctor/physician

IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower Wash contaminated clothing before reuse

IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing

Immediately call a poison center or doctor/physician

IF SWALLOWED: Rinse mouth. Do NOT induce vomiting

Precautionary Statements - Storage

Store locked up

Precautionary Statements - Disposal

Dispose of contents/container to an approved waste disposal plant

Other Hazards

Very toxic to aquatic life with long lasting effects

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS No	Weight-%
Sodium hypochlorite	7681-52-9	5-15
Sodium hydroxide	1310-73-2	1-5

If Chemical Name/CAS No is "proprietary" and/or Weight-% is listed as a range, the specific chemical identity and/or percentage of composition has been withheld as a trade secret.

4. FIRST-AID MEASURES

First Aid Measures**Eye Contact**

Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Get medical attention immediately.

Skin Contact

Remove contaminated clothing. Wash off immediately with plenty of water. Get medical attention if irritation develops or persists.

Inhalation	IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention immediately.
Ingestion	Do not induce vomiting. Rinse mouth. Drink 1 or 2 glasses of water. Never give anything by mouth to an unconscious person. Immediately call a poison center or doctor/physician.

Most important symptoms and effects

Symptoms	Burning and/or irritation to eyes and skin. Ingestion may cause severe burns to mouth, throat or stomach. May cause eye burns and permanent eye damage. May cause irritation to the mucous membranes and upper respiratory tract.
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Indication of any immediate medical attention and special treatment needed

Notes to Physician	Treat symptomatically.
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5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media

Carbon dioxide (CO2). Dry chemical. Water.

Unsuitable Extinguishing Media Not determined.

Specific Hazards Arising from the Chemical Product is not flammable.

Hazardous Combustion Products May emit toxic or corrosive fumes under fire conditions.

Protective equipment and precautions for firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Personal Precautions	Use personal protection recommended in Section 8.
Environmental Precautions	Prevent from entering into soil, ditches, sewers, waterways and/or groundwater. See Section 12, Ecological Information. See Section 13: DISPOSAL CONSIDERATIONS.

Methods and material for containment and cleaning up

Methods for Containment	Prevent further leakage or spillage if safe to do so. Soak up and contain spill with an absorbent material.
Methods for Clean-Up	Collect and reuse if possible. Sweep up absorbed material and shovel into suitable containers for disposal. Discard any product, residue, disposable container or liner in full compliance with federal, state, and local regulations.

7. HANDLING AND STORAGE

Precautions for safe handling**Advice on Safe Handling**

Handle in accordance with good industrial hygiene and safety practice. Use personal protection recommended in Section 8. Avoid contact with skin, eyes or clothing. Wash face, hands, and any exposed skin thoroughly after handling. Keep containers closed when not in use. Surfaces subject to spills of this product can become slippery. Do not breathe vapors or spray mist. Do not eat or drink while handling this material.

Conditions for safe storage, including any incompatibilities

Storage Conditions Keep container tightly closed and store in a cool, dry and well-ventilated place. Keep out of the reach of children. Store locked up.

Incompatible Materials

Strong oxidizing agents. Acids. Alkalis. Ammonia.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure Guidelines

Chemical Name	ACGIH TLV	OSHA PEL	NIOSH IDLH
Sodium hydroxide 1310-73-2	Ceiling: 2 mg/m ³	TWA: 2 mg/m ³ (vacated) Ceiling: 2 mg/m ³	IDLH: 10 mg/m ³ Ceiling: 2 mg/m ³

Appropriate engineering controls**Engineering Controls**

Ensure adequate ventilation, especially in confined areas. Maintain eye wash fountain and quick-drench facilities in work area.

Individual protection measures, such as personal protective equipment**Eye/Face Protection**

Wear safety glasses with side shields (or goggles).

Skin and Body Protection

Chemical resistant gloves recommended.

Respiratory Protection

No protection is ordinarily required under normal conditions of use and with adequate ventilation. Wear an appropriate NIOSH/MSHA approved respirator if ventilation is inadequate. Refer to 29 CFR 1910.134 for respiratory protection requirements.

General Hygiene Considerations

Avoid contact with skin, eyes and clothing. After handling this product, wash hands before eating, drinking, or smoking. If contact occurs, remove contaminated clothing. If needed, take first aid action shown on section 4 of this SDS. Launder contaminated clothing before reuse.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties**Physical State**

Liquid

Appearance

Clear pale yellow liquid

Odor

Chlorine

Color

Clear pale yellow

Odor Threshold

Not determined

Property**Remarks • Method**

Values

12.5-13.5

pH

Melting Point/Freezing Point	Not determined
Boiling Point/Boiling Range	103.88 °C / 219 °F
Flash Point	Not determined
Evaporation Rate	Not determined
Flammability (Solid, Gas)	Liquid-Not applicable
Upper Flammability Limits	Not determined
Lower Flammability Limit	Not determined
Vapor Pressure	Not determined
Vapor Density	Not determined
Specific Gravity	1.24
Water Solubility	Completely soluble
Solubility in other solvents	Not determined
Partition Coefficient	Not determined
Auto-ignition Temperature	Not determined
Decomposition Temperature	Not determined
Kinematic Viscosity	Not determined
Dynamic Viscosity	Not determined
Explosive Properties	Not determined
Oxidizing Properties	Not determined

10. STABILITY AND REACTIVITY**Reactivity**

Not reactive under normal conditions.

Chemical Stability

Stable under recommended storage conditions.

Possibility of Hazardous Reactions None
under normal processing.

Hazardous Polymerization

Hazardous polymerization does not occur.

Conditions to Avoid

Keep out of reach of children.

Incompatible Materials

Strong oxidizing agents. Acids. Alkalis. Ammonia.

Hazardous Decomposition Products Chlorine gas.**11. TOXICOLOGICAL INFORMATION****Information on likely routes of exposure****Product Information****Eye Contact**

Causes severe eye damage.

Skin Contact

Causes severe skin burns.

Inhalation

Avoid breathing vapors or mists. May cause irritation to the mucous membranes and upper respiratory tract.

Ingestion

May cause chemical burns to mouth, throat and stomach.

Component Information

Chemical Name	Oral LD50	Dermal LD50	Inhalation LC50
Sodium hypochlorite 7681-52-9	= 8200 mg/kg (Rat)	> 10000 mg/kg (Rabbit)	-
Sodium hydroxide 1310- 73-2	-	= 1350 mg/kg (Rabbit)	-

Information on physical, chemical and toxicological effects**Symptoms**

Please see section 4 of this SDS for symptoms.

Delayed and immediate effects as well as chronic effects from short and long-term exposure**Carcinogenicity**

The table below indicates whether each agency has listed any ingredient as a carcinogen. However, the product as a whole has not been tested.

Chemical Name	ACGIH	IARC	NTP	OSHA
Sodium hypochlorite 7681-52-9		Group 3		

Legend*IARC (International Agency for Research on Cancer)**Group 3 IARC components are "not classifiable as human carcinogens"***Numerical measures of toxicity**

Not determined

12. ECOLOGICAL INFORMATION

Ecotoxicity

Very toxic to aquatic life with long lasting effects.

Component Information

Chemical Name	Algae/aquatic plants	Fish	Toxicity to microorganisms	Crustacea
Sodium hypochlorite 7681-52-9	0.095: 24 h Skeletonema costatum mg/L EC50	0.06 - 0.11: 96 h Pimephales promelas mg/L LC50 flow-through 4.5 - 7.6: 96 h Pimephales promelas mg/L LC50 static 0.4 - 0.8: 96 h Lepomis macrochirus mg/L LC50 static 0.28 - 1: 96 h Lepomis macrochirus mg/L LC50 flow-through 0.05 - 0.771: 96 h Oncorhynchus mykiss mg/L LC50 flow-through 0.03 - 0.19: 96 h Oncorhynchus mykiss mg/L LC50 semi-static 0.18 - 0.22: 96 h Oncorhynchus mykiss mg/L LC50 static		0.033 - 0.044: 48 h Daphnia magna mg/L EC50 Static 2.1: 96 h Daphnia magna mg/L EC50
Sodium hydroxide 1310-73-2		45.4: 96 h Oncorhynchus mykiss mg/L LC50 static		

Persistence/Degradability Not determined.

Bioaccumulation Not determined.

Mobility
Not determined

Other Adverse Effects
Not determined

13. DISPOSAL CONSIDERATIONS

Waste Treatment Methods

Disposal of Wastes

Disposal should be in accordance with applicable regional, national and local laws and regulations.

Contaminated Packaging

Disposal should be in accordance with applicable regional, national and local laws and regulations.

California Hazardous Waste Status

Chemical Name	California Hazardous Waste Status
Sodium hydroxide 1310-73-2	Toxic Corrosive

14. TRANSPORT INFORMATION

Note

Please see current shipping paper for most up to date shipping information, including exemptions and special circumstances.

DOT

Please contact manufacturer for most current information

IATA

Please contact manufacturer for most current information

IMDG

Please contact manufacturer for most current information

15. REGULATORY INFORMATION

International Inventories

Chemical Name	TSCA	DSL	NDSL	EINECS	ELINCS	ENCS	IECSC	KECL	PICCS	AICS
Sodium hypochlorite	Present	X		Present		Present	X	Present	X	X
Sodium hydroxide	Present	X		Present		Present	X	Present	X	X

Legend:

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

DSL/NDSL - 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

US Federal Regulations

CERCLA

This material, as supplied, contains one or more substances regulated as a hazardous substance under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302)

Chemical Name	Hazardous Substances RQs	CERCLA/SARA RQ	Reportable Quantity (RQ)
Sodium hypochlorite 7681-52-9	100 lb		RQ 100 lb final RQ RQ 45.4 kg final RQ
Sodium hydroxide 1310- 73-2	1000 lb		RQ 1000 lb final RQ RQ 454 kg final RQ

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

CWA (Clean Water Act)

This product contains the following substances which are regulated 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	100 lb			X
Sodium hydroxide	1000 lb			X

US State Regulations

California Proposition 65

This product does not contain any Proposition 65 chemicals.

U.S. State Right-to-Know Regulations

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

16. OTHER INFORMATION

NFPA

Health Hazards

3

Flammability

0

Instability 1

Special Hazards

Not determined

HMIS

Health Hazards

3

Flammability

0

Physical Hazards

1

Personal Protection

Not determined

Issue Date: 27-Feb-2001

Revision Date: 02-Sep-2015

Revision Note: New format

Disclaimer

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

End of Safety Data Sheet