Safety Data Sheet : Sodium hypochlorite

AQUA CHEM
CHEMICAL TRADING

SECTION 1: Identification

1.1. Product identifier

Product name	**Sodium hypochlorite solution**
Synonyms, Trade Names	**Commonly called bleach solution**
REACH Registration number	**01-2119488154-34**
CAS-No.	**7681-52-9**
EC No.	**231-668-3**

1.2. Relevant identified uses of the substance or mixture and uses advised against

Identified uses: Treatment of drinking water, has received approval by the European Committee for Standardisation.

Washing and cleaning products Pulp and paper manufacturing Cleaning agent. Treatment of waste water. Finishing agent (textiles) Manufacture of substances. Disinfectant

1.3. Recommended use and restrictions on use

Use of the substance/mixture	**Industrial use**
Recommended use	**Laboratory chemicals**
Restrictions on use	**Not for food, drug or household use**

1.3. Supplier

Company name	**Aqua Chem Chemical Trading**
Address	**Al Agamy Al Bahri, Dekhela, Alexandrie, Egypte**
Tel	**+201 144 455 246**
Fax	**+201 144 455 246**
Email	**aquachem@aquachemeg.com**

1.4. Emergency telephone number

Emergency number : +201 144 455 246

SECTION 2: Hazard(s) identification

2.1. Classification of the substance or mixture

Classification (EC 1272/2008)

Physical and Chemical HazardsMet. Corr. 1 - H290

Human health EUH031;Skin Corr. 1B - H314

Environment Aquatic Acute 1 - H400;Aquatic Chronic 2 - H411

Classification (1999/45/EEC) C;R34. N;R50. R31.

The Full Text for all R-Phrases and Hazard Statements are Displayed in Section 16.

Human health

Vapours may irritate the respiratory system and cause coughing, asthmatic breathing and breathlessness. Corrosive to skin and eyes.

Environment

The product contains a substance which is very toxic to aquatic organisms.

Physical and Chemical Hazards

Contact with acids liberates toxic chlorine gas Product may be corrosive to some metals

2.2. Label elements

EC No.	**231-668-3**
Contains	**SODIUM HYDROXIDE Sodium hypochlorite**

Label In Accordance With (EC) No. 1272/2008

Signal Word	**Danger**	
Hazard Statements		
	H290	**May be corrosive to metals.**
	H314	**Causes severe skin burns and eye damage.**
	H400	**Very toxic to aquatic life.**
	H411	**Toxic to aquatic life with long lasting effects.**

Precautionary Statements

P273	Avoid release to the environment.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P303+361+353	IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
P304+340	IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
P305+351+338	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.
P403+235	Store in a well-ventilated place. Keep cool.

Supplementary Precautionary Statements

P260	Do not breathe vapour/spray.
P264	Wash contaminated skin thoroughly after handling.
P301+330+331	IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
P363	Wash contaminated clothing before reuse.
P390	Absorb spillage to prevent material damage.
P391	Collect spillage.
P405	Store locked up.
P406	Store in corrosive resistant/... container with a resistant inner liner.
P501	Dispose of contents/container in accordance with national regulations.

Supplemental label information

EUH031	Contact with acids liberates toxic gas.

SECTION 3: Composition/Information on ingredients

3.1. Mixtures

SODIUM HYDROXIDE		**0.1 - 1.0%**
CAS-No.: 1310-73-2	**EC No.: 215-185-5**	
Classification (EC 1272/2008) **Skin Corr. 1A - H314**	**Classification (67/548/EEC)** **C;R35**	
Sodium hypochlorite		**5-20%**

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CAS-No.: 7681-52-9	EC No.: 231-668-3
Classification (EC 1272/2008) Met. Corr. 1 - H290 EUH031 Skin Corr. 1B - H314 Aquatic Acute 1 - H400 Aquatic Chronic 2 - H411	Classification (67/548/EEC) C;R34. N;R50. R31.

The Full Text for all R-Phrases and Hazard Statements are Displayed in Section 16.

REACH Registration number	01-2119488154-34
CAS-No.	7681-52-9
EC No.	231-668-3
Gross Formula	NaOCl + NaCl

SECTION 4: First-aid measures

4.1. Description of first aid measures

General information

Get medical attention immediately! Inhalation

Move the exposed person to fresh air at once. For breathing difficulties oxygen may be necessary.

Inhalation:

Do not induce vomiting. If confined to the mouth, rinse mouth thoroughly and ensure water is not swallowed. If swallowed, drink plenty of water. If substance has been swallowed, give water to drink immediately Skin contact

Remove contaminated clothes and rinse skin thoroughly with water.

Eye contact

Immediately flush with plenty of water for up to 15 minutes. Remove any contact lenses and open eyes wide apart.

4.2. Most important symptoms and effects, both acute and delayed

4.3. Indication of any immediate medical attention and special treatment needed

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SECTION 5: Fire-fighting measures

5.1. Extinguishing media

Extinguishing media

Use fire-extinguishing media appropriate for surrounding materials.

5.2. Special hazards arising from the substance or mixture

Hazardous combustion products

Thermal decomposition will evolve Chlorine. Contact with heavy metals, their compounds and alloys the product decomposes with evolution of oxygen.

5.3. Advice for firefighters

Protective equipment for fire-fighters

Self contained breathing apparatus and full protective clothing must be worn in case of fire.

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions, protective equipment and emergency procedures

Wear protective clothing as described in Section 8 of this safety data sheet.

6.2. Environmental precautions

Do not discharge into drains, water courses or onto the ground.

6.3. Methods and material for containment and cleaning up

Flush away small spillages with plenty of water. Large Spillages: Absorb with sand or other inert absorbent. Pick up with vacuum or absorbent solid, store in closed container for disposal.

6.4. Reference to other sections

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Avoid contact with eyes. Handle with care as an alkaline material. Wear appropriate protective clothing. Avoid inhalation of vapours and spray mists. Do not mix with acids, or other cleaning fluids (espicially ammonia).

7.2. Conditions for safe storage, including any incompatibilities

Unsuitable containers: metals. Store in vented vessels of rubber lined mild steel or HDPE. Uncontolled pressure build up may occur in closed systems (vessels, pipes etc.) so all containers must have a venting device. Sludge may build up in tanks over time, due to salt deposition. Keep away from acids, ammonia solutions, amines and methanol. Keep away from from heat and direct sunlight.

7.3. Specific end use(s)

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SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Name	STD	TWA - 8 Hrs		STEL - 15 Min		Notes
SODIUM HYDROXIDE	WEL				2 mg/m3	

WEL = Workplace Exposure Limit.

Ingredient Comments

Chlorine vapour STEL 15min 0.5 ppm, 1.5 mg/m3

DNEL

Industry	Inhalation.	Long Term	1.55	mg/m3
Industry	Inhalation.	Short Term	3.1	mg/m3
Consumer	Inhalation.	Long Term	1.55	mg/m3
Consumer	Inhalation.	Short Term	3.1	mg/m3
Consumer	Oral	Long Term	Systemic Effects	0.26 mg/kg/day

8.2. Exposure controls

Protective equipment



Process conditions

Provide eyewash station.

Engineering measures

Provide adequate general and local exhaust ventilation.

Respiratory equipment

For respirator use cartridge type P3 SL

Hand protection

Wear protective gloves. Rubber or plastic.

Eye protection

Goggles/face shield are recommended.

Other Protection

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SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Appearance	Liquid
Colour	Green yellow
Odour	Irritating. Chlorine.
Solubility	Completely soluble in water
Initial boiling point and boiling range	110 Decomposes with heat
Melting point (°C)	-17ºC
Relative density	1.26 20
pH-Value, Conc. Solution	> 13

9.2. Other information

SECTION 10: STABILITY AND REACTIVITY

10.1. Reactivity

Violent reaction with: Acids.

10.2. Chemical stability

Avoid Contact with acids.

10.3. Possibility of hazardous reactions

Contact with acids liberates toxic chlorine gas. Reacts with amines and ammonia to form explosive compounds, and can react violently with methanol.

10.4. Conditions to avoid

Store in a cool dry place away from direct sunlight.

10.5. Incompatible materials

Materials To Avoid

Contact with acids liberates toxic chlorine gas. Decomposition with evolution of oxygen is accelerated by heat and light, and also by contact with metals, particularly copper, nickel, iron and monel.

10.6. Hazardous decomposition products

Thermal decomposition will evolve toxic vapours.

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SECTION 11: TOXICOLOGICAL INFORMATION

11.1. Information on toxicological effects

Toxic Dose 1 - LD 50
>1200 mg/kg (oral
rat) Acute toxicity:

Acute Toxicity (Dermal LD50)

> 2000 mg/kg Rat

Skin Corrosion/Irritation:
Corrosive

Respiratory or skin sensitisation:
Not Sensitising.

Germ cell mutagenicity:
This substance has no evidence of mutagenic properties.

Carcinogenicity:
This substance has no evidence of carcinogenic properties.

Inhalation

Mist/droplets are corrosive to the respiratory tract, and will cause a burning sensation in the throat, coughing and breathing difficulties.

Ingestion

If ingested will cause severe damage to gastrointestinal tract.

Skin contact

Causes burns. Prolonged or repeated contact may cause dermatitis

Eye contact

Risk of serious damage to eyes. Risk of corneal damage.

SECTION 12: ECOLOGICAL INFORMATION

12.1. Toxicity

LC 50, 96 Hrs, Fish mg/l	0.01-0.1

mg/l active chlorine

EC 50, 48 Hrs, Daphnia, mg/l 0.01-0.1

IC 50, 72 Hrs, Algae, mg/l Technically unfeasible

Acute Toxicity - Microorganisms

LOEC 0.375 mg/l Activated sludge

12.2. Persistence and degradability

Degradability

The product quickly decomposes in water or soil

12.3. Bioaccumulative potential

Bioaccumulative potential Will not bio-accumulate.

12.4. Mobility in soil

Mobility:

The product is soluble in water.

12.5. Results of PBT and vPvB assessment

This product does not contain any PBT or vPvB substances.

12.6. Other adverse effects

SECTION 13: DISPOSAL CONSIDERATIONS

13.1. Waste treatment methods

Dispose of waste and residues in accordance with local authority requirements. Do not allow runoff to sewer, waterway or ground. Collect in marked containers and deliver to approved depot. Contaminated area should be washed with large amounts of water

SECTION 14: TRANSPORT INFORMATION

14.1. UN number

UN No. (ADR/RID/ADN)	1791
UN No. (IMDG)	1791
UN No. (ICAO)	1791

14.2. UN proper shipping name

Proper Shipping Name	HYPOCHLORITE SOLUTION
Proper Shipping Name	HYPOCHLORITE SOLUTION

14.3. Transport hazard class(es)

ADR/RID/ADN Class	8

ADR/RID/ADN Class	Class 8: Corrosive substances.
ADR Label No.	8
IMDG Class	8
ICAO Class/Division	8

Transport Labels

14.4. Packing group

ADR/RID/ADN Packing group	II
IMDG Packing group	II
ICAO Packing group	II

14.5. Environmental hazards

Environmentally Hazardous Substance/Marine Pollutant

14.6. Special precautions for user

EMS	F-A, S-B
Emergency Action Code	2X
Hazard No. (ADR)	80
Tunnel Restriction Code	(E)

14.7. Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code

SECTION 15: REGULATORY INFORMATION

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

EU Legislation

This product has been approved as a chemical used for the treatment of drinking water, under the appropriate BS EN Standard (see Sales

Specification), and so it is also approved by the British Drinking Water Inspectorate. Regulation (EC) No 1907/2006 of the European

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Parliament and the Council of 18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH). Directive 98/8/EC of the European Parliament and of the Council of 16 February 1998 concerning the placing of biocidal products on the market.

Water hazard classification

WGK 2

15.2. Chemical Safety Assessment

A chemical safety assessment has been carried out.

SECTION 16: OTHER INFORMATION

Revision Comments

Corrections to concentrations in Sections 3, and transport information and Section14.

Issued By	Chief Chemist
Revision Date	29/10/2012
Revision	5
Supersedes date	October 2012
Risk Phrases In Full	
R31	Contact with acids liberates toxic gas.
R34	Causes burns.
R35	Causes severe burns.
R50	Very toxic to aquatic organisms.
Hazard Statements In Full	
EUH031	Contact with acids liberates toxic gas.
H290	May be corrosive to metals.
H314	Causes severe skin burns and eye damage.
H400	Very toxic to aquatic life.
H411	Toxic to aquatic life with long lasting effects.

Disclaimer

This 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. Such information is, to the best of the company's knowledge and belief, accurate and reliable as of the date indicated. However, no warranty guarantee or representation is made to its accuracy, reliability or completeness. It is the user's responsibility to satisfy himself as to the suitability of such information for his own particular use.