Sodium Hypochlorite

Safety Data Sheet

according to the United Nations GHS (Rev. 10, 2023)
Issue date: 10/20/2024 Revision date: 10/19/2027 Version: 1.0

BCI
الصناعات الكيميائية الأساسية
BASIC CHEMICAL INDUSTRIES

SECTION 1: Identification

1.1. GHS Product identifier

Product form : Mixture
Product name : Sodium Hypochlorite

1.2. Other means of identification

No additional information available

1.3. Recommended use of the chemical and restrictions on use

Recommended use : Disinfection
Bleaching agent
water treatment

1.4. Supplier's details

Supplier
Chemical Marketing and Distribution Co. Ltd.
Dammam 31431,
P.O. Box 1053
Saudi Arabia
T +966138217777 - F +966138472648
sales@bci.com.sa

1.5. Emergency phone number

Emergency number : +966138217777

SECTION 2: Hazard identification

2.1. Classification of the substance or mixture

Classification according to the United Nations GHS

Skin corrosion/irritation, Category 1	H314
Hazardous to the aquatic environment – Acute Hazard, Category 1	H400

Full text of H-statements: see section 16

Adverse physicochemical, human health and environmental effects : Causes severe skin burns and eye damage,Very toxic to aquatic life.

2.2. GHS Label elements, including precautionary statements

Labelling according to the United Nations GHS

Hazard pictograms (GHS UN) :

Signal word (GHS UN) : Danger
Hazardous ingredients : Sodium hypochlorite
Hazard statements (GHS UN) : H314 - Causes severe skin burns and eye damage
H400 - Very toxic to aquatic life
Precautionary statements (GHS UN) : P260 - Do not breathe dusts or mists.
P264 - Wash hands hands, forearms and face thoroughly after handling.
P273 - Avoid release to the environment.
P280 - Wear protective clothing, eye protection, face protection, protective gloves.
P301+P330+P331 - IF SWALLOWED: rinse mouth. Do NOT induce vomiting.
P302+P361+P354 - IF ON SKIN: Take off immediately all contaminated clothing. Immediately rinse with water for several minutes.
P304+P340 - IF INHALED: Remove person to fresh air and keep comfortable for breathing.

P305+P354+P338 - IF IN EYES: Immediately rinse with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P316 - Get emergency medical help immediately.
P321 - Specific treatment (see specific cleansing agent(s), supplemental first aid instruction on this label).
P363 - Wash contaminated clothing before reuse.
P391 - Collect spillage.
P405 - Store locked up.
P501 - Dispose of contents and container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation.

2.3. Other hazards which do not result in classification

No additional information available

SECTION 3: Composition/information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Name	Product identifier	%	Classification according to the United Nations GHS
Sodium hypochlorite	CAS-No.: 7681-52-9	10-12.5	Skin Corr. 1B, H314 Eye Dam. 1, H318 Aquatic Acute 1, H400 (M=10) Aquatic Chronic 1, H410 (M=10)

Full text of H-statements: see section 16

SECTION 4: First-aid measures

4.1. Description of necessary first-aid measures

First-aid measures general : Call a physician immediately. If you feel unwell, seek medical advice (show the label where possible).

First-aid measures after inhalation : Remove person to fresh air and keep comfortable for breathing. Obtain medical attention if breathing difficulty persists.

First-aid measures after skin contact : Remove affected clothing and wash all exposed skin area with mild soap and water, followed by warm water rinse. Rinse skin with water/shower. Take off immediately all contaminated clothing. Call a physician immediately. Seek medical attention if ill effect or irritation develops.

First-aid measures after eye contact : Rinse immediately with plenty of water. Rinse immediately with plenty of water for 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Obtain medical attention if pain, blinking or redness persists. Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Call a physician immediately. Seek medical attention if ill effect or irritation develops.

First-aid measures after ingestion : Rinse mouth. Do NOT induce vomiting. Rinse mouth. Do not induce vomiting. Call a physician immediately.

4.2. Most important symptoms/effects, acute and delayed

Symptoms/effects after skin contact : Burns.

Symptoms/effects after eye contact : Serious damage to eyes.

Symptoms/effects after ingestion : Burns.

4.3. Indication of immediate medical attention and special treatment needed, if necessary

Treat symptomatically.

SECTION 5: Fire-fighting measures

5.1. Suitable extinguishing media

Suitable extinguishing media : Foam. Dry powder. Carbon dioxide. Water spray. Sand.
Unsuitable extinguishing media : Do not use a heavy water stream.

5.2. Specific hazards arising from the chemical

Hazardous decomposition products in case of fire : Toxic fumes may be released. Thermal decomposition can lead to the release of irritating gases and vapours.

5.3. Special protective actions for fire-fighters

Firefighting instructions : Use water spray or fog for cooling exposed containers. Exercise caution when fighting any chemical fire. Prevent fire fighting water from entering the environment.
Protective equipment for firefighters : Do not enter fire area without proper protective equipment, including respiratory protection. Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General measures : Evacuate unnecessary personnel.
Personal Precautions, Protective Equipment and Emergency Procedures : Wear recommended personal protective equipment. For further information refer to section 8: "Exposure controls/personal protection".
Prevention Measures for Secondary Accidents : Avoid release to the environment.

6.1.1. For non-emergency personnel

Protective equipment : Wear personal protective equipment. Wear suitable protective clothing. For further information refer to section 8: "Exposure controls/personal protection".
Emergency procedures : Ventilate spillage area. Avoid contact with skin and eyes. Do not breathe dust/fume/gas/mist/vapours/spray.

6.1.2. For emergency responders

Protective equipment : Do not attempt to take action without suitable protective equipment. Wear recommended personal protective equipment. For further information refer to section 8: "Exposure controls/personal protection".

6.2. Environmental precautions

Avoid release to the environment. Prevent entry to sewers and public waters.

6.3. Methods and materials for containment and cleaning up

For containment : Soak up with inert absorbent material (for example sand, sawdust, a universal binder, silica gel). Collect spillage.
Methods for cleaning up : Take up liquid spill into absorbent material. Soak up spills with inert solids, such as clay or diatomaceous earth as soon as possible. Collect spillage. Store away from other materials.
Other information : Dispose of materials or solid residues at an authorized site.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling : Ensure good ventilation of the work station. Provide good ventilation in process area to prevent formation of vapour. Avoid contact with skin and eyes. Do not breathe dust/fume/gas/mist/vapours/spray. Wear personal protective equipment.
Hygiene measures : Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Wash contaminated clothing before reuse. Do not eat, drink or smoke when using this product. Always wash hands after handling the product. Handle in accordance with good industrial hygiene and safety procedures.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions	:	Keep only in the original container in a cool well ventilated place. Keep container closed when not in use. Store locked up. Store in a well-ventilated place. Keep cool.
Packaging materials	:	Polyethylene. Steel containers. Jerry Can PE. IBC HDPE.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

No additional information available

8.2. Appropriate engineering controls

Appropriate engineering controls	:	Ensure good ventilation of the work station.
Environmental exposure controls	:	Avoid release to the environment.
Other information	:	Do not eat, drink or smoke during use.

8.3. Individual protection measures, such as personal protective equipment (PPE)

Personal protective equipment:
Wear protective gloves. Wear protective clothing. Wear foot protection. Wear a mask.

Hand protection	:	Impermeable protective gloves. protective gloves
Eye protection	:	Chemical goggles or safety glasses. Safety glasses
Skin and body protection	:	Wear suitable protective clothing
Respiratory protection	:	In case of insufficient ventilation, wear suitable respiratory equipment. Wear suitable respiratory equipment in case of insufficient ventilation

Personal protective equipment symbol(s)

8.4. Exposure limit values for the other components

No additional information available

SECTION 9: Physical and chemical properties

9.1. Basic physical and chemical properties

Physical state	:	Liquid
Colour	:	Colorless to slightly yellow.
Odour	:	chlorine-like.
Odour threshold	:	Not available
Melting point	:	Not available
Freezing point	:	-6 °C
Boiling point	:	100 °C (Approximately)
Flammability	:	Non flammable
Lower explosion limit	:	Not available
Upper explosion limit	:	Not available
Flash point	:	Not available
Auto-ignition temperature	:	Not available
Decomposition temperature	:	Not available
pH	:	11 – 13 (Strongly alkaline)
pH solution	:	Not available
Viscosity, kinematic (calculated value) (40 °C)	:	Not available
Partition coefficient n-octanol/water	:	1.1 – 1.24
Vapour pressure	:	Not available
Vapour pressure at 50°C	:	Not available
Density	:	Not available

Relative density	:	Not available
Relative vapour density at 20°C	:	Not available
Solubility	:	completely (100%) soluble in water.
Particle size	:	Not applicable

9.2. Data relevant with regard to physical hazard classes (supplemental)

Oxidising properties	:	Strong oxidiser

SECTION 10: Stability and reactivity

10.1. Reactivity

The product is non-reactive under normal conditions of use, storage and transport.

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.

10.4. Conditions to avoid

Heat, light, contamination.

10.5. Incompatible materials

Acids, ammonia, metals, reducing agents.

10.6. Hazardous decomposition products

Decomposition will result in the formation of oxygen from contact with copper, nickel, cobalt and iron solids such as rust. The decomposition rate increases as it is heated. May develop chlorine if mixed with acidic solutions

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity (oral)	:	Not classified (Based on available data, the classification criteria are not met)
Acute toxicity (dermal)	:	Not classified (Based on available data, the classification criteria are not met)
Acute toxicity (inhalation)	:	Not classified (Based on available data, the classification criteria are not met)

Sodium Hypochlorite	
Unknown acute toxicity (GHS UN)Unknown acute toxicity (GHS UN)	87.5% of the mixture consists of ingredient(s) of unknown acute toxicity (Oral) 100% of the mixture consists of ingredient(s) of unknown acute toxicity (Dermal) 100% of the mixture consists of ingredient(s) of unknown acute toxicity (Inhalation (Dust/Mist))

Sodium hypochlorite (7681-52-9)	
LD50 oral rat	8.91 g/kg (Source: NLM_HSDB)
LD50 oral	8910 mg/kg bodyweight
LD50 dermal rabbit	> 20000 mg/kg (Source: ECHA_API)
LD50 dermal	> 20000 mg/kg bodyweight
LC50 Inhalation - Rat	> 10.5 mg/l (Exposure time: 1 h Source: ECHA_API)
LC50 Inhalation - Rat (Dust/Mist)	> 10500 mg/l
LC50 Inhalation - Rat (Vapours)	> 10.5 mg/l

Skin corrosion/irritation	:	Causes severe skin burns. pH: 11 – 13 (Strongly alkaline)

Serious eye damage/irritation	:	Assumed to cause serious eye damage pH: 11 – 13 (Strongly alkaline)
Respiratory or skin sensitization	:	Not classified (Based on available data, the classification criteria are not met)
Germ cell mutagenicity	:	Not classified (Based on available data, the classification criteria are not met)
Carcinogenicity	:	Not classified (Based on available data, the classification criteria are not met)
Reproductive toxicity	:	Not classified (Based on available data, the classification criteria are not met)
STOT-single exposure	:	Not classified (Based on available data, the classification criteria are not met)
STOT-repeated exposure	:	Not classified (Based on available data, the classification criteria are not met)
Aspiration hazard	:	Not classified (Based on available data, the classification criteria are not met)
Other information	:	Likely routes of exposure: ingestion, inhalation, skin and eye.

SECTION 12: Ecological information

12.1. Toxicity

Hazardous to the aquatic environment, short–term (acute)	:	Very toxic to aquatic life.
Classification procedure (Hazardous to the aquatic environment, short–term (acute))	:	Calculation method
Hazardous to the aquatic environment, long–term (chronic)	:	Not classified (Based on available data, the classification criteria are not met)

Sodium hypochlorite (7681-52-9)	
LC50 - Fish [1]	0.06 – 0.11 mg/l (Exposure time: 96 h - Species: Pimephales promelas [flow-through] Source: EPA)
LC50 - Fish [2]	4.5 – 7.6 mg/l (Exposure time: 96 h - Species: Pimephales promelas [static] Source: EPA)
EC50 - Crustacea [1]	0.033 – 0.044 mg/l (Exposure time: 48 h - Species: Daphnia magna [Static])
EC50 - Crustacea [2]	35 µg/l Test organisms (species): Ceriodaphnia dubia
EC50 - Other aquatic organisms [1]	0.141 mg/l waterflea
EC50 72h - Algae [1]	0.0365 mg/l Test organisms (species): Pseudokirchneriella subcapitata (previous names: Raphidocelis subcapitata, Selenastrum capricornutum)
EC50 72h - Algae [2]	0.0183 mg/l Test organisms (species): Pseudokirchneriella subcapitata (previous names: Raphidocelis subcapitata, Selenastrum capricornutum)
NOEC chronic fish	0.005 mg/l

12.2. Persistence and degradability

Sodium Hypochlorite	
Persistence and degradability	Rapidly degradable

Sodium hypochlorite (7681-52-9)	
Persistence and degradability	Not rapidly degradable

12.3. Bioaccumulative potential

Sodium Hypochlorite	
Partition coefficient n-octanol/water (Log Pow)	1.1 – 1.24
Bioaccumulative potential	No additional information available

Sodium hypochlorite (7681-52-9)	
Partition coefficient n-octanol/water (Log Pow)	-3.42

12.4. Mobility in soil

Sodium Hypochlorite	
Mobility in soil	No additional information available

12.5. Other adverse effects

Ozone : Not classified (Based on available data, the classification criteria are not met)
Other adverse effects : No additional information available
Effect on the ozone layer : No additional information available.
Other information : Avoid release to the environment.

SECTION 13: Disposal considerations

13.1. Disposal methods

Waste treatment methods : Dispose of contents/container in accordance with licensed collector's sorting instructions.
Product/Packaging disposal recommendations : Dispose of in a safe manner in accordance with local/national regulations.
Ecological waste information : Avoid release to the environment.

SECTION 14: Transport information

In accordance with UN RTDG / IMDG / IATA /

UN RTDG	IMDG	IATA
14.1. UN number		
1791	1791	1791
14.2. UN Proper Shipping Name		
HYPOCHLORITE SOLUTION	HYPOCHLORITE SOLUTION (Sodium hypochlorite)	Hypochlorite solution
14.3. Transport hazard class(es)		
8	8	8
		
14.4. Packing group		
II	II	II
14.5. Environmental hazards		
Dangerous for the environment: Yes	Dangerous for the environment: Yes Marine pollutant: Yes	Dangerous for the environment: Yes
No supplementary information available		

14.6. Special precautions for user

UN RTDG

Limited quantities (UN RTDG) : 1L
Excepted quantities (UN RTDG) : E2
Packing instruction (UN RTDG) : P001, IBC02
Special packing provisions (UN RTDG) : PP10, B5
Portable tank and bulk container special instructions (UN RTDG) : T7
Portable tank and bulk container special provisions (UN RTDG) : TP2, TP24

IMDG

Special provisions (IMDG)	:	274, 900
Limited quantities (IMDG)	:	1 L
Excepted quantities (IMDG)	:	E2
Packing instructions (IMDG)	:	P001
Special packing provisions (IMDG)	:	PP10
IBC packing instructions (IMDG)	:	IBC02
IBC special provisions (IMDG)	:	B5
Tank instructions (IMDG)	:	T7
Tank special provisions (IMDG)	:	TP2, TP24
EmS-No. (Fire)	:	F-A - FIRE SCHEDULE Alfa - GENERAL FIRE SCHEDULE
EmS-No. (Spillage)	:	S-B - SPILLAGE SCHEDULE Bravo - CORROSIVE SUBSTANCES
Stowage category (IMDG)	:	B
Segregation (IMDG)	:	SGG8, SG20
Properties and observations (IMDG)	:	Liquid with chlorine odour. In contact with acids, evolves very irritating and corrosive gases. Mildly corrosive to most metals. Causes burns to skin, eyes and mucous membranes.

IATA

PCA Excepted quantities (IATA)	:	E2
PCA Limited quantities (IATA)	:	Y840
PCA limited quantity max net quantity (IATA)	:	0.5L
PCA packing instructions (IATA)	:	851
PCA max net quantity (IATA)	:	1L
CAO packing instructions (IATA)	:	855
CAO max net quantity (IATA)	:	30L
Special provisions (IATA)	:	A3, A803
ERG code (IATA)	:	8L

14.7. Transport in bulk according to IMO instruments

Not applicable

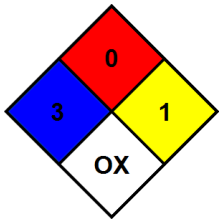
SECTION 15: Regulatory information

15.1. Safety, health and environmental regulations specific for the product in question

No additional information available

SECTION 16: Other information

NFPA health hazard	:	3 - Materials that, under emergency conditions, can cause serious or permanent injury.
NFPA fire hazard	:	0 - Materials that will not burn under typical fire conditions, including intrinsically noncombustible materials such as concrete, stone, and sand.
NFPA reactivity	:	1 - Materials that in themselves are normally stable but can become unstable at elevated temperatures and pressures.
NFPA specific hazard	:	OX - Materials that posses oxidizing properties.



Hazard Rating

Health	:	3 Serious Hazard - Major injury likely unless prompt action is taken and medical treatment is given
Flammability	:	0 Minimal Hazard - Materials that will not burn
Physical	:	1 Slight Hazard - Materials that are normally stable but can become unstable (self-react) at high temperatures and pressures. Materials may react non-violently with water or undergo hazardous polymerization in the absence of inhibitors.

Issue date	:	10/20/2024
Revision date	:	10/19/2027

Other information	:	None.

Full text of H-statements:	
Aquatic Chronic 1	Hazardous to the aquatic environment – Chronic Hazard, Category 1
Eye Dam. 1	Serious eye damage/eye irritation, Category 1
Skin Corr. 1B	Skin corrosion/irritation, Category 1B
H314	Causes severe skin burns and eye damage
H318	Causes serious eye damage
H400	Very toxic to aquatic life
H410	Very toxic to aquatic life with long lasting effects

Safety Data Sheet (SDS), UN

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.