

Safety Data Sheet

Sodium hypochlorite, solution 12-15 % Cl active

Safety Data Sheet dated 21/11/2022 version 2



SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Identification of the substance:

Trade name: SODIUM HYPOCHLORITE 12% m/m < conc active chlorine < 15% m/m

Article number: 10535

Chemical name: sodium hypochlorite, solution 12-15 % Cl active

CAS number: 7681-52-9

EC number: 231-668-3

Index number: 017-011-00-1

Registration Number 01-2119488154-34-0030

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

Recommended use: FOR INDUSTRIAL USE

See attached exposure scenario.

Uses advised against: N.A.

1.3. Details of the supplier of the safety data sheet

Company:

HydroChem Italia S.R.L.

Via Mario Massari, 30/32, 28886 Pieve Vergonte VB/ITALY

Phone +39 0324 8601

Fax +39 0324 86694

Homepage www.hydrochemitalia.it

Competent person responsible for the safety data sheet: sds@hydrochemitalia.it

1.4. Emergency telephone number

Company: +39 0324 8601 Mo-Fr 8:00-17:00

Malta: 112

SECTION 2: Hazards identification



2.1. Classification of the substance or mixture

Regulation (EC) n. 1272/2008 (CLP)

Skin Corr. 1B Causes severe skin burns and eye damage.

Eye Dam. 1 Causes serious eye damage.

Aquatic Acute 1 Very toxic to aquatic life.

Aquatic Chronic 2 Toxic to aquatic life with long lasting effects.

Met. Corr. 1 May be corrosive to metals.

Adverse physicochemical, human health and environmental effects:

No other hazards

2.2. Label elements

Regulation (EC) No 1272/2008 (CLP):

Pictograms and Signal Words



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

- P260 Do not breathe dust/fume/gas/mist/vapours/spray.
P273 Avoid release to the environment.
P280 Wear protective gloves/clothing and eye/face protection.
P301+P330+P331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
1
P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower].
3
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
8
P310 Immediately call a POISON CENTER/doctor/...
P390 Absorb spillage to prevent material damage.
P403+P233 Store in a well-ventilated place. Keep container tightly closed.

Special Provisions:

EUH031 Contact with acids liberates toxic gas.

Special provisions according to Annex XVII of REACH and subsequent amendments:

None.

2.3. Other hazards

This substance has no PBT, vPvB or endocrine disrupting properties

Other Hazards: No other hazards

SECTION 3: Composition/information on ingredients

3.1. Substances

Substance Identifications: sodium hypochlorite, solution 12-15 % Cl active
CAS number: 7681-52-9
EC number: 231-668-3
Index number: 017-011-00-1
Registration Number 01-2119488154-34-0030

M factor:

M (acute) : 10

M (chronic) : 1

Specific Concentration Limits

C ≥ 5% EUH031

3.2. Mixtures

N.A.

SECTION 4: First aid measures

4.1. Description of first aid measures

In case of skin contact:

Wash immediately with water.

OBTAIN IMMEDIATE MEDICAL ATTENTION.

In case of persistent skin irritation consult a doctor.

In case of eyes contact:

After contact with the eyes, rinse with water with the eyelids open for a sufficient length of time, then consult an ophthalmologist immediately.

Protect uninjured eye.

OBTAIN IMMEDIATE MEDICAL ATTENTION.

In case of Ingestion:

Do not induce vomiting, get medical attention showing the SDS and hazard labelling.

OBTAIN IMMEDIATE MEDICAL ATTENTION.

In case of Inhalation:

Remove casualty to fresh air and keep warm and at rest.

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

Gastrointestinal disorders

Gastric perforation

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

In case of accident or unwellness, seek medical advice immediately (show directions for use or safety data sheet if possible).

Treatment: Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media:

According to the materials involved in the fire.

Water.

Extinguishing media which must not be used for safety reasons:

full jet of water.

5.2. Special hazards arising from the substance or mixture

Product itself is non-combustible.

Hazardous combustion products:

Hydrogen chloride

Chlorine

halogenated compounds

5.3. Advice for firefighters

Wear suitable protective clothing (helmet, protective clothings, goggles, fire resistant gloves, boots) and protect respiratory organs (self contained breathing apparatus).

Use suitable breathing apparatus .

Move undamaged containers from immediate hazard area if it can be done safely.

Collect contaminated fire extinguishing water separately. This must not be discharged into drains.

Fire residues and contaminated firefighting water must be disposed of in accordance within the local regulations.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Wear personal protection equipment.

Remove persons to safety.

See protective measures under point 7 and 8.

6.2. Environmental precautions

Do not allow to enter into soil/subsoil. Do not allow to enter into surface water or drains.

In case of gas escape or of entry into waterways, soil or drains, inform the responsible authorities.

6.3. Methods and material for containment and cleaning up

Prevent dispersion over a wide area (e.g. with containment or oil barriers)

Suitable material for taking up: absorbing material, organic, sand

Contain the product and contaminated materials with mechanical means.

Dispose of the collected material in accordance with the current regulations.

Wash with plenty of water.

Retain contaminated washing water and dispose it.

6.4. Reference to other sections

See also section 8 and 13

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Avoid contact with skin and eyes, inhalation of vapours and mists.

Don't use empty container before they have been cleaned.

Before making transfer operations, assure that there aren't any incompatible material residuals in the containers.

Advice on general occupational hygiene:

Contaminated clothing should be changed before entering eating areas.

Do not eat or drink while working.

See also section 8 for recommended protective equipment.

7.2. Conditions for safe storage, including any incompatibilities

Keep away from food, drink and feed.

Always keep in a well ventilated place.

Incompatible materials:

Keep away from oxidizing agents

Keep away from acids.

Keep away from combustible materials.

See subsection 10

Instructions as regards storage premises:

Provide alkali-resistant floor.

Keep away from unguarded flame, sparks, and heat sources. Avoid direct exposure to sunlight.

Cool and adequately ventilated.

Packaging materials:

Always keep the containers tightly closed.

7.3. Specific end use(s)

Recommendation(s)

None in particular

Industrial sector specific solutions:

None in particular

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

OEL Type	Long Term mg/m3	Long Term ppm	Short Term mg/m3	Short Term ppm	Notes
EU			0.500	1.500	Ref. to Cl2

Predicted No Effect Concentration (PNEC) values

PNEC Limit	Exposure Route	Exposure Frequency	Remark
0.042 µg/L	Fresh Water		
0.21 µg/L	Marine water		
4.69 mg/l	STP		

Derived No Effect Level (DNEL) values

Worker Industry	Worker Professional	Consumer	Exposure Route	Exposure Frequency	Remark
1.55 mg/m3		1.55 mg/m3	Human Inhalation	Long Term, local effects	
1.55 mg/m3		1.55 mg/m3	Human Inhalation	Long Term, systemic effects	
3.1 mg/m3		3.1 mg/m3	Human Inhalation	Short Term, local effects	
3.1 mg/m3		3.1 mg/m3	Human Inhalation	Short Term, systemic effects	
		0.26 mg/kg	Human Oral	Long Term, systemic effects	

8.2. Exposure controls

Individual protection measures:

Personal protective equipment selections vary based on potential exposure conditions and working conditions.

The final choice of protective equipment will depend upon a risk assessment.

Personal protective equipment (PPE) should meet recommended national standards. Check with PPE suppliers.

Please see both sections 5 and 6 for information about personal protective equipment to be worn in an emergency (e.g.: fire or unintentional release of the substance).

Eye protection:

Chemical risk goggles (with side protection).

Technical reference standard: UNI EN 166

Protection for skin:

Wear chemical resistant safety shoes.

Technical reference standard: UNI EN 13034

Protection for hands:

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer.

Glove suitability and breakthrough time will differ depending on the specific use conditions.

Contact the glove manufacturer for specific advice on glove selection and breakthrough times for your use conditions.

Wear suitable gloves tested to EN374.

Suitable material:

Butyl caoutchouc (butyl rubber). (Recommended thickness of the material: 0.7 mm; Permeation time: > 480 min).

Respiratory protection:

Depending on the potential for exposure, select respiratory protective equipment suitable for the specific conditions of use and in compliance with current legislation.

Respiratory protection mask in the event of high concentrations.

Short term: filter apparatus, filter B-P2 (DIN EN 14387)

Thermal Hazards:

N.A.

Environmental exposure controls:

Comply with the applicable environmental regulations limiting discharge to air, water and soil.

Hygienic and Technical measures

N.A.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical State: Liquid

Color: Light yellow

Odour: Pungent

Odour threshold: (Data not available.)

pH: >11

Kinematic viscosity: N.A.

Melting point / freezing point: -20°C

Initial boiling point and boiling range: 96/120 °C

Flash point: N.A. (Study scientifically not necessary)

Upper/lower flammability or explosive limits: N.A.

Vapour density: N.A.

Vapour pressure: 17/20 hPa (20°C)

Relative density: 1.26 g/cm³

Solubility in water: Miscible

Solubility in oil: N.A.

Partition coefficient (n-octanol/water): -3.42

Auto-ignition temperature: N.A. (Study scientifically not necessary)

Decomposition temperature: N.A.

Flammability: Non-flammable

Volatile Organic compounds - VOCs = N.A.

Particle characteristics:

Particle size: Not Relevant (Does not apply to liquid.)

9.2. Other information

Miscibility: N.A.

Conductivity: N.A.

Explosive properties: (There are no chemical groups present in the molecule which are associated with these properties)

Oxidizing properties: (There are no chemical groups present in the molecule which are associated with these properties)

Evaporation rate: N.A.

No other relevant information

SECTION 10: Stability and reactivity

10.1. Reactivity

Contact with acids liberates chlorine, toxic gas.

10.2. Chemical stability

The stability of the solution decreases with the action of heat, light and in the presence of some traces of impurities.

10.3. Possibility of hazardous reactions

Reactions with water.

Reactions with reducing agents.

Contact with acids liberates chlorine, toxic gas. Reacts with ammonia in solution and amines forming explosive compounds. It can react violently in contact with many metals, in particular: copper, nickel, iron.

10.4. Conditions to avoid

Keep away from heat and direct sunlight.

10.5. Incompatible materials

Acids (violent decomposition with release of chlorine), metals (decomposition with release of oxygen), combustible materials.

10.6. Hazardous decomposition products

Chlorine, hypochlorous acid, sodium chloride.

SECTION 11: Toxicological information

11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008

Toxicological Information of the Substance

a) acute toxicity	Not classified Based on available data, the classification criteria are not met LD50 Oral Rat > 1100 mg/kg - Ref. to Cl LC50 Inhalation Rat > 10.5 mg/l - Ref. to Cl LD50 Skin Rabbit > 20000 mg/kg - Ref. to Cl
b) skin corrosion/irritation	The product is classified: Skin Corr. 1B(H314) Skin Corrosive Skin Positive
c) serious eye damage/irritation	The product is classified: Eye Dam. 1(H318) Eye Corrosive Skin Positive
d) respiratory or skin sensitisation	Not classified Based on available data, the classification criteria are not met
e) germ cell mutagenicity	Not classified Based on available data, the classification criteria are not met
f) carcinogenicity	Not classified Based on available data, the classification criteria are not met
g) reproductive toxicity	Not classified Based on available data, the classification criteria are not met
h) STOT-single exposure	Not classified Based on available data, the classification criteria are not met
i) STOT-repeated exposure	Not classified Based on available data, the classification criteria are not met
j) aspiration hazard	Not classified Based on available data, the classification criteria are not met

11.2. Information on other hazards

Endocrine disrupting properties:

This substance has no endocrine disrupting properties

SECTION 12: Ecological information

12.1. Toxicity

Adopt good working practices, so that the product is not released into the environment.

Eco-Toxicological Information:

Toxic to aquatic life with long lasting effects.

List of Eco-Toxicological properties of the product

The product is classified: Aquatic Acute 1(H400), Aquatic Chronic 2(H411)

- a) Aquatic acute toxicity : LC50 Fish = 0.032 mg/l 96h
- a) Aquatic acute toxicity : EC50 Daphnia = 0.141 mg/l 48h
- a) Aquatic acute toxicity : EC50 Crustaceans = 0.026 mg/l 48h

12.2. Persistence and degradability

N.A.

12.3. Bioaccumulative potential

N.A.

12.4. Mobility in soil

Mobility in soil

Mobile

12.5. Results of PBT and vPvB assessment

This substance has no PBT, vPvB or endocrine disrupting properties

12.6. Endocrine disrupting properties

This substance has no endocrine disrupting properties

12.7. Other adverse effects

The product is an alkaline solution. Neutralisation is normally necessary prior to the discharge of waste water into the sewage treatment plant.

Prior to discharge into sewage treatment plants, obtain permission from the competent authorities.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Recover, if possible. Send to authorised disposal plants or for incineration under controlled conditions. In so doing, comply with the local and national regulations currently in force.

SECTION 14: Transport information

14.1. UN number or ID number

1791

14.2. UN proper shipping name

ADR-Shipping Name: HYPOCHLORITE SOLUTION

IATA-Technical name: HYPOCHLORITE SOLUTION

IMDG-Technical name: HYPOCHLORITE SOLUTION

14.3. Transport hazard class(es)

ADR-Class: 8

IATA-Class: 8

IMDG-Class: 8

14.4. Packing group

ADR-Packing Group: II

IATA-Packing group: II

IMDG-Packing group: II

14.5. Environmental hazards

Marine pollutant: Yes

Environmental Pollutant: Yes

IMDG-EMS: F-A, S-B

14.6. Special precautions for user

Road and Rail (ADR-RID):

ADR-Label: 8

ADR - Hazard identification number: 80

ADR-Special Provisions: 521

ADR-Transport category (Tunnel restriction code): 2 (E)

Air (IATA):

IATA-Passenger Aircraft: 851

IATA-Cargo Aircraft: 855

IATA-Label: 8

IATA-Subsidiary hazards: -

IATA-Erg: 8L

IATA-Special Provisions: A3 A803

Sea (IMDG):

IMDG-Stowage Code: Category B

IMDG-Stowage Note: SG20 SGG8

IMDG-Subsidiary hazards: -

IMDG-Special Provisions: 274 900

14.7. Maritime transport in bulk according to IMO instruments

N.A.

SECTION 15: Regulatory information

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

Regulation (EU) n. 2020/878

Regulation (EC) n. 1907/2006 (REACH) and subsequent amendments

Regulation (EC) n. 1272/2008 (CLP) and subsequent amendments

Dir. 98/24/EC (Risks related to chemical agents at work)

Dir. 2000/39/EC (Occupational exposure limit values)

Restrictions related to the product or the substances contained according to Annex XVII Regulation (EC) 1907/2006 (REACH) and subsequent modifications:

Restrictions related to the product: 3, 75

Restrictions related to the substances contained: None.

Provisions related to directive EU 2012/18 (Seveso III):

Seveso III category according to Annex 1, part 1

Product belongs to category: E1 100 200

Regulation (EU) No 649/2012 (PIC regulation)

No substances listed

Where applicable, refer to the following regulatory provisions :

German Water Hazard Class.

Class 2: hazardous for water.

SVHC Substances:

No data available

15.2. Chemical safety assessment

A Chemical Safety Assessment has been carried out for the substance.

SECTION 16: Other information

This document was prepared by a competent person who has received appropriate training.

Main bibliographic sources:

ECDIN - Environmental Chemicals Data and Information Network - Joint Research Centre, Commission of the European Communities

SAX's DANGEROUS PROPERTIES OF INDUSTRIAL MATERIALS - Eight Edition - Van Nostrand Reinold

The information contained herein is based on our state of knowledge at the above-specified date. It refers solely to the product indicated and constitutes no guarantee of particular quality.

It is the duty of the user to ensure that this information is appropriate and complete with respect to the specific use intended.

This MSDS cancels and replaces any preceding release.

Legend to abbreviations and acronyms used in the safety data sheet:

ACGIH: American Conference of Governmental Industrial Hygienists

ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road.

AND: European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways

ATE: Acute Toxicity Estimate

ATEmix: Acute toxicity Estimate (Mixtures)

BCF: Biological Concentration Factor

BEI: Biological Exposure Index

BOD: Biochemical Oxygen Demand

CAS: Chemical Abstracts Service (division of the American Chemical Society).

CAV: Poison Center

CE: European Community

CLP: Classification, Labeling, Packaging.

CMR: Carcinogenic, Mutagenic and Reprotoxic

COD: Chemical Oxygen Demand

COV: Volatile Organic Compound

CSA: Chemical Safety Assessment

CSR: Chemical Safety Report

DMEL: Derived Minimal Effect Level

DNEL: Derived No Effect Level.

DPD: Dangerous Preparations Directive

DSD: Dangerous Substances Directive

EC50: Half Maximal Effective Concentration

ECHA: European Chemicals Agency

EINECS: European Inventory of Existing Commercial Chemical Substances.

ES: Exposure Scenario

GefStoffVO: Ordinance on Hazardous Substances, Germany.

GHS: Globally Harmonized System of Classification and Labeling of Chemicals.

IARC: International Agency for Research on Cancer

IATA: International Air Transport Association.

IATA-DGR: Dangerous Goods Regulation by the "International Air Transport Association" (IATA).

IC50: half maximal inhibitory concentration

ICAO: International Civil Aviation Organization.

ICAO-TI: Technical Instructions by the "International Civil Aviation Organization" (ICAO).

IMDG: International Maritime Code for Dangerous Goods.

INCI: International Nomenclature of Cosmetic Ingredients.

IRCCS: Scientific Institute for Research, Hospitalization and Health Care

KAFH: KAFH

KSt: Explosion coefficient.

LC50: Lethal concentration, for 50 percent of test population.

LD50: Lethal dose, for 50 percent of test population.

LDLo: Leathal Dose Low

N.A.: Not Applicable

N/D: Not defined/ Not available

NIOSH: National Institute for Occupational Safety and Health

NOAEL: No Observed Adverse Effect Level

OSHA: Occupational Safety and Health Administration.

PBT: Persistent, Bioaccumulative and Toxic

PGK: Packaging Instruction

PNEC: Predicted No Effect Concentration.

PSG: Passengers

RID: Regulation Concerning the International Transport of Dangerous Goods by Rail.

STEL: Short Term Exposure limit.

STOT: Specific Target Organ Toxicity.

TLV: Threshold Limiting Value.

TWATLV: Threshold Limit Value for the Time Weighted Average 8 hour day. (ACGIH Standard).

vPvB: Very Persistent, Very Bioaccumulative.

WGK: German Water Hazard Class.

Paragraphs modified from the previous revision:

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