



Safety Data Sheet dated 27/4/2020, version 13

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

#### 1.1. Product identifier

Trade name: SODIUM HYPOCHLORITE, SOLUTION  
Chemical name: SODIUM HYPOCHLORITE, SOLUTION 12-15 % CL ACTIVE  
CAS number: 7681-52-9  
EC number: 231-668-3  
REACH number: 01-2119488154-34-0056

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

Recommended use:

FOR INDUSTRIAL USE

FOR PROFESSIONAL USE

#### 1.3. Details of the supplier of the safety data sheet

Company:

ALTAIR CHIMICA S.p.a.

Via Moie Vecchie 13

56048 Saline di Volterra (PI)

Competent person responsible for the safety data sheet: [sds@altairchimica.com](mailto:sds@altairchimica.com)

#### 1.4. Emergency telephone number

ALTAIR CHIMICA S.p.a. Phone n. +39-0588-9811

### SECTION 2: Hazards identification

#### 2.1. Classification of the substance or mixture

EC regulation criteria 1272/2008 (CLP)

- ⚠ Warning, Met. Corr. 1, May be corrosive to metals.
  - ⚠ Danger, Skin Corr. 1B, Causes severe skin burns and eye damage.
  - ⚠ Danger, Eye Dam. 1, Causes serious eye damage.
  - ⚠ Warning, Aquatic Chronic 1, Very toxic to aquatic life with long lasting effects.
  - ⚠ Warning, Aquatic Acute 1, Very toxic to aquatic life.
- EUH031 Contact with acids liberates toxic gas.

Adverse physicochemical, human health and environmental effects:

No other hazards

#### 2.2. Label elements

Hazard pictograms:



Danger

Hazard statements:

H290 May be corrosive to metals.

H314 Causes severe skin burns and eye damage.

H410 Very 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/protective clothing/eye protection/face protection.

P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower.

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 doctor.

P403+P233 Store in a well-ventilated place. Keep container tightly closed.

Special Provisions:

# Safety Data Sheet

## SODIUM HYPOCHLORITE, SOLUTION

EUH031 Contact with acids liberates toxic gas.

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

None

### 2.3. Other hazards

vPvB Substances: None - PBT Substances: None

Other Hazards:

No other hazards

## SECTION 3: Composition/information on ingredients

### 3.1. Substances

Trade name: SODIUM HYPOCHLORITE, SOLUTION  
 Chemical name: SODIUM HYPOCHLORITE, SOLUTION 12-15 % CL ACTIVE  
 CAS number: 7681-52-9  
 EC number: 231-668-3  
 REACH number: 01-2119488154-34-0056

Hazardous components within the meaning of the CLP regulation and related classification:

Qty	Name	Ident. Number	Classification
>= 90%	sodium hypochlorite, solution 12-15 % Cl active	Index number: 017-011-00-1 CAS: 7681-52-9 EC: 231-668-3	⚠ 2.16/1 Met. Corr. 1 H290 ⚠ 3.2/1B Skin Corr. 1B H314 ⚠ 3.3/1 Eye Dam. 1 H318 ⚠ 4.1/C1 Aquatic Chronic 1 H410 ⚠ 4.1/A1 Aquatic Acute 1 H400 M=10. EUH031

### 3.2. Mixtures

N.A.

## SECTION 4: First aid measures

### 4.1. Description of first aid measures

In case of skin contact:

Immediately take off all contaminated clothing.

Areas of the body that have - or are only even suspected of having - come into contact with the product must be rinsed immediately with plenty of running water and possibly with soap.

OBTAIN IMMEDIATE MEDICAL ATTENTION.

After contact with skin, wash immediately with soap and plenty of water.

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.

In case of Ingestion:

Do not under any circumstances induce vomiting. OBTAIN A MEDICAL EXAMINATION IMMEDIATELY.

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.

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### **SECTION 5: Firefighting measures**

- 5.1. Extinguishing media
  - Suitable extinguishing media:
    - Water.
    - Carbon dioxide (CO<sub>2</sub>).
  - Extinguishing media which must not be used for safety reasons:
    - None in particular.
- 5.2. Special hazards arising from the substance or mixture
  - Do not inhale explosion and combustion gases.
- 5.3. Advice for firefighters
  - 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.

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### **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.
  - Retain contaminated washing water and dispose it.
  - In case of gas escape or of entry into waterways, soil or drains, inform the responsible authorities.
  - Suitable material for taking up: absorbing material, organic, sand
- 6.3. Methods and material for containment and cleaning up
  - After the product has been recovered, rinse the area and materials involved with water.
  - Wash with plenty of water.
- 6.4. Reference to other sections
  - See also section 8 and 13

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### **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.
  - See also section 8 for recommended protective equipment.
  - Advice on general occupational hygiene:
    - Contaminated clothing should be changed before entering eating areas.
    - Do not eat or drink while working.
- 7.2. Conditions for safe storage, including any incompatibilities
  - Always keep in a well ventilated place.
  - Keep away from food, drink and feed.
  - Incompatible materials:
    - Keep away from acids.
  - Instructions as regards storage premises:
    - Cool and adequately ventilated.
- 7.3. Specific end use(s)
  - None in particular

## **SECTION 8: Exposure controls/personal protection**

### 8.1. Control parameters

SODIUM HYPOCHLORITE, SOLUTION - CAS: 7681-52-9

EU - STEL: 0.5 mg/m<sup>3</sup>, 1.5 ppm - Notes: Ref. to Cl<sub>2</sub>

### DNEL Exposure Limit Values

SODIUM HYPOCHLORITE, SOLUTION - CAS: 7681-52-9

Worker Industry: 1.55 mg/m<sup>3</sup> - Exposure: Human Inhalation - Frequency: Long Term, local effects

Worker Industry: 1.55 mg/m<sup>3</sup> - Exposure: Human Inhalation - Frequency: Long Term, systemic effects

Worker Industry: 3.1 mg/m<sup>3</sup> - Exposure: Human Inhalation - Frequency: Short Term, local effects

Worker Industry: 3.1 mg/m<sup>3</sup> - Exposure: Human Inhalation - Frequency: Short Term, systemic effects

Consumer: 1.55 mg/m<sup>3</sup> - Exposure: Human Inhalation - Frequency: Long Term, local effects

Consumer: 0.26 mg/kg - Exposure: Human Oral - Frequency: Long Term, systemic effects

Consumer: 1.55 mg/m<sup>3</sup> - Exposure: Human Inhalation - Frequency: Long Term, systemic effects

Consumer: 3.1 mg/m<sup>3</sup> - Exposure: Human Inhalation - Frequency: Short Term, local effects

Consumer: 3.1 mg/m<sup>3</sup> - Exposure: Human Inhalation - Frequency: Short Term, systemic effects

### PNEC Exposure Limit Values

SODIUM HYPOCHLORITE, SOLUTION - CAS: 7681-52-9

Target: Fresh Water - Value: 0.00021 mg/l

Target: Marine water - Value: 0.000042 mg/l

Target: STP - Value: 4.69 mg/l

### 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:

Eye glasses with side protection.

#### Protection for skin:

Use clothing that provides comprehensive protection to the skin, e.g. cotton, rubber, PVC or viton.

#### 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.

Suitable material:

Butyl caoutchouc (butyl rubber).

NBR (nitrile rubber).

PVC (polyvinyl chloride).

UNI EN 420/UNI EN 374

Use protective gloves that provides comprehensive protection.

### 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.

Gas filtering device (DIN EN 141).

### Thermal Hazards:

None

### Environmental exposure controls:

None

### Appropriate engineering controls:

None

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## SECTION 9: Physical and chemical properties

### 9.1. Information on basic physical and chemical properties

Appearance and colour:	Liquid	
Odour:	Characteristic	
Odour threshold:	N.A.	
pH:	>11	
Melting point / freezing point:	N.A.	
Initial boiling point and boiling range:	N.A.	
Solid/gas flammability:	N.A.	
Upper/lower flammability or explosive limits:		N.A.
Vapour density:	N.A.	
Flash point:	N.A.	
Evaporation rate:	N.A.	
Vapour pressure:	N.A.	
Relative density:	1.26 g/cm <sup>3</sup>	
Solubility in water:	100%	
Solubility in oil:	N.A.	
Partition coefficient (n-octanol/water):	N.A.	
Auto-ignition temperature:	N.A.	
Decomposition temperature:	N.A.	
Viscosity:	N.A.	
Explosive properties:	N.A.	
Oxidizing properties:	N.A.	

### 9.2. Other information

Miscibility:	N.A.	
Fat Solubility:	N.A.	
Conductivity:	N.A.	
Substance Groups relevant properties		N.A.

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## 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

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.

None in particular.

### 10.6. Hazardous decomposition products

Chlorine, hypochlorous acid, sodium chloride.

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## **SECTION 11: Toxicological information**

### 11.1. Information on toxicological effects

Toxicological information of the substance:

SODIUM HYPOCHLORITE, SOLUTION - CAS: 7681-52-9

a) acute toxicity

Not classified

Based on available data, the classification criteria are not met

Test: LD50 - Route: Oral - Species: Rat > 1100 mg/kg - Notes: Ref. to CI

Test: LC50 - Route: Inhalation - Species: Rat > 10.5 mg/l - Notes: Ref. to CI

Test: LD50 - Route: Skin - Species: Rabbit > 20000 mg/kg - Notes: Ref. to CI

b) skin corrosion/irritation

The product is classified: Skin Corr. 1B H314

Test: Skin Corrosive - Route: Skin Positive

c) serious eye damage/irritation

The product is classified: Eye Dam. 1 H318

Test: Eye Corrosive - Route: 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

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## **SECTION 12: Ecological information**

### 12.1. Toxicity

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

SODIUM HYPOCHLORITE, SOLUTION - CAS: 7681-52-9

The product is classified: Aquatic Chronic 1 - H410; Aquatic Acute 1 - H400

a) Aquatic acute toxicity:

Endpoint: LC50 - Species: Fish = 0.06 mg/l - Duration h: 96

Endpoint: LC50 - Species: Fish = 0.032 mg/l - Duration h: 96

Endpoint: EC50 - Species: Daphnia = 0.141 mg/l - Duration h: 48

Endpoint: EC50 - Species: Crustaceans = 0.026 mg/l - Duration h: 48

### 12.2. Persistence and degradability

N.A.

### 12.3. Bioaccumulative potential

N.A.

### 12.4. Mobility in soil

SODIUM HYPOCHLORITE, SOLUTION - CAS: 7681-52-9

Mobility in soil: Mobile

- 12.5. Results of PBT and vPvB assessment  
 vPvB Substances: None - PBT Substances: None
- 12.6. Other adverse effects  
 None

**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  
 ADR-UN Number: 1791  
 IATA-UN Number: 1791  
 IMDG-UN Number: 1791
- 14.2. UN proper shipping name  
 ADR-Shipping Name: HYPOCHLORITE SOLUTION  
 IATA-Shipping Name: HYPOCHLORITE SOLUTION  
 IMDG-Shipping Name: HYPOCHLORITE SOLUTION
- 14.3. Transport hazard class(es)  
 ADR-Class: 8  
 ADR - Hazard identification number: 80  
 IATA-Class: 8  
 IATA-Label: 8  
 IMDG-Class: 8
- 14.4. Packing group  
 ADR-Packing Group: II  
 IATA-Packing group: II  
 IMDG-Packing group: II
- 14.5. Environmental hazards  
 ADR-Environmental Pollutant: Yes  
 IMDG-Marine pollutant: Marine Pollutant
- 14.6. Special precautions for user  
 ADR-Subsidiary hazards: -  
 ADR-S.P.: 521  
 ADR-Transport category (Tunnel restriction code): (E)  
 IATA-Passenger Aircraft: 851  
 IATA-Subsidiary hazards: -  
 IATA-Cargo Aircraft: 855  
 IATA-S.P.: A3 A803  
 IATA-ERG: 8L  
 IMDG-EmS: F-A , S-B  
 IMDG-Subsidiary hazards: -  
 IMDG-Stowage and handling: Category B  
 IMDG-Segregation: "Away from" acids.
- 14.7. Transport in bulk according to Annex II of Marpol and the IBC Code  
 N.A.

**SECTION 15: Regulatory information**



- 15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture  
 Dir. 98/24/EC (Risks related to chemical agents at work)  
 Dir. 2000/39/EC (Occupational exposure limit values)  
 Regulation (EC) n. 1907/2006 (REACH)  
 Regulation (EC) n. 1272/2008 (CLP)  
 Regulation (EC) n. 790/2009 (ATP 1 CLP) and (EU) n. 758/2013  
 Regulation (EU) 2015/830  
 Regulation (EU) n. 286/2011 (ATP 2 CLP)  
 Regulation (EU) n. 618/2012 (ATP 3 CLP)  
 Regulation (EU) n. 487/2013 (ATP 4 CLP)  
 Regulation (EU) n. 944/2013 (ATP 5 CLP)  
 Regulation (EU) n. 605/2014 (ATP 6 CLP)  
 Regulation (EU) n. 2015/1221 (ATP 7 CLP)  
 Regulation (EU) n. 2016/918 (ATP 8 CLP)  
 Regulation (EU) n. 2016/1179 (ATP 9 CLP)  
 Regulation (EU) n. 2017/776 (ATP 10 CLP)  
 Regulation (EU) n. 2018/699 (ATP 11 CLP)  
 Regulation (EU) n. 2018/1480 (ATP 13 CLP)

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:

Restriction 3

Restrictions related to the substances contained:

No restriction.

Where applicable, refer to the following regulatory provisions :

Directive 2012/18/EU (Seveso III)

Regulation (EC) nr 648/2004 (detergents).

1999/13/EC (VOC directive)

Dir. 2004/42/EC (VOC directive)

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

Seveso III category according to Annex 1, part 1

Product belongs to category: E1

15.2. Chemical safety assessment

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

## SECTION 16: Other information

Full text of phrases referred to in Section 3:

H290 May be corrosive to metals.

H314 Causes severe skin burns and eye damage.

H318 Causes serious eye damage.

H410 Very toxic to aquatic life with long lasting effects.

H400 Very toxic to aquatic life.

EUH031 Contact with acids liberates toxic gas.

Hazard class and hazard category	Code	Description
Met. Corr. 1	2.16/1	Substance or mixture corrosive to metals, Category 1
Skin Corr. 1B	3.2/1B	Skin corrosion, Category 1B
Eye Dam. 1	3.3/1	Serious eye damage, Category 1
Aquatic Acute 1	4.1/A1	Acute aquatic hazard, category 1



Aquatic Chronic 1	4.1/C1	Chronic (long term) aquatic hazard, category 1
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Paragraphs modified from the previous revision:

SECTION 2: Hazards identification  
SECTION 3: Composition/information on ingredients  
SECTION 8: Exposure controls/personal protection  
SECTION 12: Ecological information  
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.

ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road.  
ATE: Acute Toxicity Estimate  
ATEmix: Acute toxicity Estimate (Mixtures)  
CAS: Chemical Abstracts Service (division of the American Chemical Society).  
CLP: Classification, Labeling, Packaging.  
DNEL: Derived No Effect Level.  
EINECS: European Inventory of Existing Commercial Chemical Substances.  
GefStoffVO: Ordinance on Hazardous Substances, Germany.  
GHS: Globally Harmonized System of Classification and Labeling of Chemicals.  
IATA: International Air Transport Association.  
IATA-DGR: Dangerous Goods Regulation by the "International Air Transport Association" (IATA).  
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.  
KSt: Explosion coefficient.  
LC50: Lethal concentration, for 50 percent of test population.  
LD50: Lethal dose, for 50 percent of test population.  
N.A.: Not Available  
PNEC: Predicted No Effect Concentration.  
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.  
TWA: Time-weighted average  
WGK: German Water Hazard Class.