

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 24.11.2023

Version number 1

Revision: 29.08.2023

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

- **1.1 Product identifier**
- **Trade name:** Sodium hypochlorite
- **Article number:** 83
- **CAS Number:**
7681-52-9
- **EC number:**
231-668-3
- **Index number:**
017-011-00-1
- **1.2 Relevant identified uses of the substance or mixture and uses advised against**
No further relevant information available.
- **Application of the substance / the mixture**
Chemical.
means for bleaching
- **1.3 Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**
Möller Chemie GmbH & Co. KG
Bürgerkamp 1
D-48565 Steinfurt
Tel.: 02551/9340-0
Fax: 02551/9340-60
- **Further information obtainable from:** Product safety department
- **1.4 Emergency telephone number:**
Poison Control Center Mainz - 24 hour emergency service - Tel.: +49 (0) 6131/19240

SECTION 2: Hazards identification

- **2.1 Classification of the substance or mixture**
- **Classification according to Regulation (EC) No 1272/2008**



GHS05 corrosion

Met. Corr.1 H290 May be corrosive to metals.
 Skin Corr. 1B H314 Causes severe skin burns and eye damage.



GHS09 environment

Aquatic Acute 1 H400 Very toxic to aquatic life.
 Aquatic Chronic 2 H411 Toxic to aquatic life with long lasting effects.

- **2.2 Label elements**
- **Labelling according to Regulation (EC) No 1272/2008**
The substance is classified and labelled according to the CLP regulation.
- **Hazard pictograms**



GHS05



GHS09

- **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.

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*H411 Toxic to aquatic life with long lasting effects.***· Precautionary statements***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 POISON CENTER/doctor.**P321 Specific treatment (see on this label).**P405 Store locked up.**P501 Dispose of contents/container in accordance with local/regional/national/international regulations.***· Additional information:***EUH031 Contact with acids liberates toxic gas.***· 2.3 Other hazards***The product does not contain any substance above the legal limits included on the list for endocrine disrupting properties established under Article 59(1) of Regulation (EC) No 1907/2006 or under Commission Delegated Regulation (EU) 2017/2100 or of Commission Regulation (EU) 2018/605 has endocrine disrupting properties.***· Results of PBT and vPvB assessment****· PBT:***The product does not contain any substances above legal limits that meet the criteria for PBT (persistent, bioaccumulative and toxic).***· vPvB:***The product does not contain any substances above legal limits that meet the criteria for vPvB (very persistent and very bioaccumulative).*

SECTION 3: Composition/information on ingredients

· 3.1 Substances**· CAS No. Description***7681-52-9 Sodium hypochlorite***· Identification number(s)****· EC number:** 231-668-3**· Index number:** 017-011-00-1**· Additional information:***Hazardous ingredients:**CAS No.: 7681-52-9 sodium hypochlorite C, N, R 31-34-50 approx. 13 %**Registration number: 01-2119488154-34 H290, H314, H335, H400, H410**CAS No.: 1310-73-2 sodium hydroxide C, R 35 < 1%**Registration number: 01-2119457892-27 H290, H314***· M-factor Aquatic Acute:** 10

SECTION 4: First aid measures

· 4.1 Description of first aid measures**· General information:** *Immediately remove any clothing soiled by the product.***· After inhalation:** *Supply fresh air.***· After skin contact:** *Immediately wash with water and soap and rinse thoroughly.***· After eye contact:** *Rinse opened eye for several minutes under running water. Then consult a doctor.***· After swallowing:***Rinse out mouth and then drink plenty of water.**Seek medical treatment.***· 4.2 Most important symptoms and effects, both acute and delayed** *No further relevant information available.*

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- **4.3 Indication of any immediate medical attention and special treatment needed**
No further relevant information available.

SECTION 5: Firefighting measures

- **5.1 Extinguishing media**
- **Suitable extinguishing agents:** CO₂, powder or water spray. Fight larger fires with water spray.
- **For safety reasons unsuitable extinguishing agents:** Water with full jet
- **5.2 Special hazards arising from the substance or mixture**
The product reacts with acids to form toxic chlorine gas.
- **5.3 Advice for firefighters**
- **Protective equipment:** Mouth respiratory protective device.
- **Additional information**
Cool endangered receptacles with water spray.
Collect contaminated fire fighting water separately. It must not enter the sewage system.

SECTION 6: Accidental release measures

- **6.1 Personal precautions, protective equipment and emergency procedures**
Mount respiratory protective device.
Wear protective equipment. Keep unprotected persons away.
- **6.2 Environmental precautions:** Do not allow to enter sewers/ surface or ground water.
- **6.3 Methods and material for containment and cleaning up:**
Absorb with liquid-binding material (sand, diatomaceous earth, acid binder, universal binder, sawdust).
Use neutralising agent.
Dispose contaminated material as waste according to section 13.
Ensure adequate ventilation.
- **6.4 Reference to other sections**
See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.

SECTION 7: Handling and storage

- **7.1 Precautions for safe handling**
Keep receptacles tightly sealed.
Avoid contact with skin, eyes and clothing.
- **Information about fire - and explosion protection:** No special measures required.
- **7.2 Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:** Protect from heat and direct sunlight.
- **Information about storage in one common storage facility:** Do not store together with acids.
- **Further information about storage conditions:** Keep container tightly sealed.
- **7.3 Specific end use(s)** No further relevant information available.

SECTION 8: Exposure controls/personal protection

- **8.1 Control parameters**
- **Ingredients with limit values that require monitoring at the workplace:**
7782-50-5 chlorine
AGW 1.5 mg/m³, 0.5 ppm (TRGS 900, DE)
- **DNELs**
7681-52-9 sodium hypochlorite
worker:
Short-term exposure - systemic and local effects - inhalative: 3.1 mg/m³

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Long-term exposure - systemic and local effects - inhalative 1.55 mg/m³

Consumer:

Long-term exposure - systemic and local effects - inhalative: 1.55 mg/m³

Long-term exposure - systemic effects - oral: 0.26 mg/kg

· **PNECs**

7681-52-9 sodium hypochlorite

Fresh water: 0.21 mg/l

Sea water: 0.042 mg/l

sporadic release: 0.26 mg/l

Sewage treatment plant: 0.03 mg/l

· **Additional information:** The lists valid during the making were used as basis.

· **8.2 Exposure controls**

· **Appropriate engineering controls** No further data; see section 7.

· **Individual protection measures, such as personal protective equipment**

· **General protective and hygienic measures:**

The usual precautionary measures are to be adhered to when handling chemicals.

· **Respiratory protection:**

In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use self-contained respiratory protective device.

· **Hand protection**



Protective gloves

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

· **Material of gloves**

Nitrile rubber, NBR

Butyl rubber, BR

PVC gloves

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.

· **Penetration time of glove material**

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

· **Eye/face protection**



Tightly sealed goggles

· **Body protection:** Protective work clothing

SECTION 9: Physical and chemical properties

· **9.1 Information on basic physical and chemical properties**

· **General Information**

· **Colour:** Yellow

· **Odour:** Like chlorine

· **Odour threshold:** Not determined.

· **Melting point/freezing point:** -20 bis -30 °C

· **Boiling point or initial boiling point and boiling range** 100 °C

· **Flammability** Not applicable.

· **Lower and upper explosion limit**

· **Lower:** Not determined.

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· Upper:	<i>Not determined.</i>
· Flash point:	<i>not applicable</i>
· Decomposition temperature:	<i>Not determined.</i>
· pH	<i>Not determined.</i>
· Viscosity:	
· Kinematic viscosity	<i>Not determined.</i>
· Dynamic at 20 °C:	<i>2.8 mPas</i>
· Solubility	
· water:	<i>Fully miscible.</i>
· Partition coefficient n-octanol/water (log value)	<i>Not determined.</i>
· Vapour pressure at 20 °C:	<i>20 hPa</i>
· Density and/or relative density	
· Density at 20 °C:	<i>1.21-1.24 g/cm³</i>
· Relative density	<i>Not determined.</i>
· Vapour density	<i>Not determined.</i>
9.2 Other information	
· Appearance:	
· Form:	<i>Fluid</i>
· Important information on protection of health and environment, and on safety.	
· Ignition temperature:	<i>Not determined.</i>
· Explosive properties:	<i>Product does not present an explosion hazard.</i>
· Change in condition	
· Evaporation rate	<i>Not determined.</i>
Information with regard to physical hazard classes	
· Explosives	<i>Void</i>
· Flammable gases	<i>Void</i>
· Aerosols	<i>Void</i>
· Oxidising gases	<i>Void</i>
· Gases under pressure	<i>Void</i>
· Flammable liquids	<i>Void</i>
· Flammable solids	<i>Void</i>
· Self-reactive substances and mixtures	<i>Void</i>
· Pyrophoric liquids	<i>Void</i>
· Pyrophoric solids	<i>Void</i>
· Self-heating substances and mixtures	<i>Void</i>
· Substances and mixtures, which emit flammable gases in contact with water	<i>Void</i>
· Oxidising liquids	<i>Void</i>
· Oxidising solids	<i>Void</i>
· Organic peroxides	<i>Void</i>
· Corrosive to metals	<i>May be corrosive to metals.</i>
· Desensitised explosives	<i>Void</i>

SECTION 10: Stability and reactivity

- **10.1 Reactivity** *No further relevant information available.*
- **10.3 Possibility of hazardous reactions** *Contact with acids releases toxic gases.*
- **10.4 Conditions to avoid** *No further relevant information available.*
- **10.5 Incompatible materials:** *Acids.*
- **10.6 Hazardous decomposition products:** *Chlorine*

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SECTION 11: Toxicological information

- **11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008**
- **Acute toxicity** Based on available data, the classification criteria are not met.
- **LD/LC50 values relevant for classification:**
 - LD50/oral/rat > 5000 mg/kg
 - LD50/dermal/rabbit > 5000 mg/kg
- **Skin corrosion/irritation**
 - Causes severe skin burns and eye damage.
- **Serious eye damage/irritation**
 - Causes severe skin burns and eye damage.
- **Respiratory or skin sensitisation** Based on available data, the classification criteria are not met.
- **Germ cell mutagenicity** Based on available data, the classification criteria are not met.
- **Carcinogenicity** Based on available data, the classification criteria are not met.
- **Reproductive toxicity** Based on available data, the classification criteria are not met.
- **STOT-single exposure** Based on available data, the classification criteria are not met.
- **STOT-repeated exposure** Based on available data, the classification criteria are not met.
- **Aspiration hazard** Based on available data, the classification criteria are not met.
- **11.2 Information on other hazards**
- **Endocrine disrupting properties** Substance is not listed.

SECTION 12: Ecological information

- **12.1 Toxicity**
- **Aquatic toxicity:**
 - Fish toxicity:
 - LC50/96h: 0.01 - 0.1 mg/l
 - Daphnia toxicity:
 - EC50/48h: 0.01 - 0.1 mg/l
- **12.2 Persistence and degradability**
 - Anorganic product, is not eliminable from water by means of biological cleaning processes.
- **12.3 Bioaccumulative potential** Keine wesentliche Bioakkumulation
- **12.4 Mobility in soil** No further relevant information available.
- **12.5 Results of PBT and vPvB assessment**
- **PBT:** The mixture is considered to be persistent, bioaccumulating nor toxic (PBT).
- **vPvB:** The mixture is not considered to be persistent nor very bioaccumulative (vPvB).
- **12.6 Endocrine disrupting properties** For information on endocrine disrupting properties see section 11.
- **12.7 Other adverse effects**
- **Remark:** Very toxic for fish
- **Additional ecological information:**
- **General notes:**
 - Water hazard class 2 (German Regulation) (Assessment by list): hazardous for water
 - Do not allow product to reach ground water, water course or sewage system.
 - Must not reach sewage water or drainage ditch undiluted or unneutralised.
 - Danger to drinking water if even small quantities leak into the ground.
 - Also poisonous for fish and plankton in water bodies.
 - Very toxic for aquatic organisms

SECTION 13: Disposal considerations

- **13.1 Waste treatment methods**
- **Recommendation** Disposal according to local regulations.
- **Uncleaned packaging:**
- **Recommendation:** Disposal must be made according to official regulations.

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· Recommended cleansing agents: Water, if necessary together with cleansing agents.

SECTION 14: Transport information

· 14.1 UN number or ID number

· ADR, IMDG, IATA

UN1791

· 14.2 UN proper shipping name

· ADR

1791 HYPOCHLORITE SOLUTION,
ENVIRONMENTALLY HAZARDOUS

· IMDG

HYPOCHLORITE SOLUTION (sodium hypochlorite,
solution), MARINE POLLUTANT

· IATA

HYPOCHLORITE SOLUTION

· 14.3 Transport hazard class(es)

· ADR



· Class

8 (C9) Corrosive substances.

· Label

8

· IMDG



· Class

8 Corrosive substances.

· Label

8

· IATA



· Class

8 Corrosive substances.

· Label

8

· 14.4 Packing group

· ADR, IMDG, IATA

II

· 14.5 Environmental hazards:

Environmentally hazardous substance, liquid; Marine
Pollutant

· Marine pollutant:

Yes (P)

· Special marking (ADR):

Symbol (fish and tree)

Symbol (fish and tree)

· 14.6 Special precautions for user

Warning: Corrosive substances.

· Hazard identification number (Kemler code):

80

· EMS Number:

F-A,S-B

· Segregation groups

(SGG8) Hypochlorites

· Stowage Category

B

· Segregation Code

SG20 Stow "away from" SGG1-acids

· 14.7 Maritime transport in bulk according to IMO
instruments

Not applicable.

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· Transport/Additional information:**· ADR****· Limited quantities (LQ)**

1L

· Excepted quantities (EQ)

Code: E2

Maximum net quantity per inner packaging: 30 ml

Maximum net quantity per outer packaging: 500 ml

· Transport category

2

· Tunnel restriction code

E

· IMDG**· Limited quantities (LQ)**

1L

· Excepted quantities (EQ)

Code: E2

Maximum net quantity per inner packaging: 30 ml

Maximum net quantity per outer packaging: 500 ml

· UN "Model Regulation":UN 1791 HYPOCHLORITE SOLUTION, 8, II,
ENVIRONMENTALLY HAZARDOUS**SECTION 15: Regulatory information****· 15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture****· Directive 2012/18/EU****· Qualifying quantity (tonnes) for the application of lower-tier requirements** 100 t**· Qualifying quantity (tonnes) for the application of upper-tier requirements** 200 t**· REGULATION (EC) No 1907/2006 ANNEX XVII** Conditions of restriction: 3, 75**· 15.2 Chemical safety assessment:** A Chemical Safety Assessment has been carried out.**SECTION 16: Other information**

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

· Department issuing SDS: Product safety department**· Contact:** Mrs. Steyer**· Abbreviations and acronyms:**

RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)

ICAO: International Civil Aviation Organisation

ADR: Accord relatif au transport international des marchandises dangereuses par route (European Agreement Concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

P: Marine Pollutant

GHS: Globally Harmonised System of Classification and Labelling of Chemicals

EINECS: European Inventory of Existing Commercial Chemical Substances

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

DNEL: Derived No-Effect Level (REACH)

PNEC: Predicted No-Effect Concentration (REACH)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

Met. Corr. 1: Corrosive to metals – Category 1

Skin Corr. 1B: Skin corrosion/irritation – Category 1B

Aquatic Acute 1: Hazardous to the aquatic environment - acute aquatic hazard – Category 1

Aquatic Chronic 2: Hazardous to the aquatic environment - long-term aquatic hazard – Category 2