

Safety Data Sheetaccording to Regulation (EC) No 1907/2006 and (EU) No
2020/878**Sodium Hypochlorite 0.5 %**

Revision date: 07.01.2025

Product code: 12871.xxxxx

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SECTION 1: Identification of the substance/mixture and of the company/undertaking**1.1. Product identifier**

Sodium Hypochlorite 0.5 %

UFI: S1N4-N1NT-600Y-U8JF

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

Use as laboratory reagent. Intended for scientific research and development.

Uses advised against

Any non-intended use.

1.3. Details of the supplier of the safety data sheet

Company name: MORPHISTO GmbH

Street: Schumannstr. 144

Place: D-63069 Offenbach

Telephone: +49 (0) 69 / 400 3019-60

Telefax: +49 (0) 69 / 400 3019-64

E-mail: info@morphisto.de

Contact person: Morphisto GmbH

E-mail: gefahrstoffmanagement@morphisto.de

Internet: http://www.morphisto.de

1.4. Emergency telephone number:

Morphisto GmbH, Tel: +49(0)69 400 3019-60, Mo-Fr.: 09-16 Uhr

SECTION 2: Hazards identification**2.1. Classification of the substance or mixture****Regulation (EC) No 1272/2008**

Aquatic Chronic 3; H412

Full text of hazard statements: see SECTION 16.

2.2. Label elements**Regulation (EC) No 1272/2008****Hazard statements**

H412 Harmful to aquatic life with long lasting effects.

Precautionary statements

P273 Avoid release to the environment.

Labelling of packages where the contents do not exceed 125 ml**Hazard statements**

H412

2.3. Other hazards

This substance/mixture contains no components considered to be either persistent, bioaccumulating and toxic (PBT) or very persistent and very bioaccumulating (vPvB) at levels of 0.1% or higher. Ecological information: The substance/mixture does not contain any components that are considered to be hazardous according to REACH Article 57(f) or Commission Delegated Regulation (EU) 2017/2100 or Commission Delegated Regulation (EU) 2018/605 in amounts of 0.1 % or more have endocrine disrupting properties. Toxicological information: The substance/mixture does not contain any components that are to be classified according to REACH Article 57(f) or Commission Delegated Regulation (EU) 2017/2100 or Commission Delegated Regulation (EU) 2018/605 in quantities of 0.1 % or more have endocrine disrupting properties.

SECTION 3: Composition/information on ingredients

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3.2. Mixtures

Relevant ingredients

CAS No	Chemical name			Quantity
	EC No	Index No	REACH No	
	Classification (Regulation (EC) No 1272/2008)			
7681-52-9	sodium hypochlorite			< 1 %
	231-668-3	017-011-00-1	01-2119488154-34	
	Met. Corr. 1, Skin Corr. 1B, Eye Dam. 1, STOT SE 3, Aquatic Acute 1, Aquatic Chronic 1; H290 H314 H318 H335 H400 H410 EUH031			

Full text of H and EUH statements: see section 16.

Specific Conc. Limits, M-factors and ATE

CAS No	EC No	Chemical name	Quantity
	Specific Conc. Limits, M-factors and ATE		
7681-52-9	231-668-3	sodium hypochlorite	< 1 %
	dermal: LD50 = 20000 mg/kg Aquatic Acute 1; H400: M=10 Aquatic Chronic 1; H410: M=1 EUH; EUH031: >= 5 - 100		

Further Information

This mixture contains no substances of very high concern (SVHC) (> 0,1%) which are included in the Candidate List according to Article 59 of REACH.

SECTION 4: First aid measures

4.1. Description of first aid measures

General information

First aider: Pay attention to self-protection! IF INHALED: If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing. Take off immediately all contaminated clothing. If unconscious but breathing normally, place in recovery position and seek medical advice.

After inhalation

If breathing is irregular or stopped, administer artificial respiration. No mouth-to-mouth or mouth-to-nose resuscitation. Use Ambu bag or ventilator. Provide fresh air. When in doubt or if symptoms are observed, get medical advice.

After contact with skin

Take off contaminated clothing and wash it before reuse. Wash with plenty of water.

After contact with eyes

Rinse immediately carefully and thoroughly with eye-bath or water. Call a physician immediately.

After ingestion

Observe risk of aspiration if vomiting occurs. If accidentally swallowed rinse the mouth with plenty of water (only if the person is conscious) and obtain immediate medical attention. Call a physician immediately.

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

Corrosion, risk of blindness, stomach perforation, risk of serious eye damage

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

Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media

Co-ordinate fire-fighting measures to the fire surroundings. Suitable: Carbon dioxide (CO₂), alcohol-resistant foam, dry extinguishing agent, water spray. Adjust extinguishing measures to the environment.

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Unsuitable extinguishing media

Unsuitable: Do not use water in full jet.

5.2. Special hazards arising from the substance or mixtureNon-flammable. In case of fire may be liberated: Chlorine (Cl₂). Hydrogen chloride (HCl).**5.3. Advice for firefighters**

In case of fire: Wear self-contained breathing apparatus. Protective clothing.

Additional information

Collect contaminated fire extinguishing water separately. Do not allow entering drains or surface water.

SECTION 6: Accidental release measures**6.1. Personal precautions, protective equipment and emergency procedures****General advice**

Avoid all contact with the substance.

6.2. Environmental precautions

Do not allow to enter into surface water or drains. Clean contaminated articles and floor according to the environmental legislation.

6.3. Methods and material for containment and cleaning up**For cleaning up**

Absorb with liquid-binding material (sand, diatomaceous earth, acid- or universal binding agents). Treat the recovered material as prescribed in the section on waste disposal.

6.4. Reference to other sections

Safe handling: see section 7

Personal protection equipment: see section 8

Disposal: see section 13

SECTION 7: Handling and storage**7.1. Precautions for safe handling****Advice on safe handling**

The usual precautions for handling chemicals should be considered. Avoid contact with skin, eyes and clothes. Take off contaminated clothing and wash it before reuse. When using do not eat, drink, smoke, sniff. Wash hands before breaks and after work.

Advice on protection against fire and explosion

No special fire protection measures are necessary.

Advice on general occupational hygiene

Take off contaminated clothing. Wash hands before breaks and after work. When using do not eat, drink, smoke, sniff. General protection and hygiene measures - see section 7.1

Further information on handling

Decomposes when heated, releasing oxygen, dichloroxide, chlorine or hydrogen chloride.

7.2. Conditions for safe storage, including any incompatibilities**Requirements for storage rooms and vessels**

Keep container tightly closed. No metal containers.

Hints on joint storage

Do not store together with acids.

Further information on storage conditions

storage temperature: 15-25 °C

7.3. Specific end use(s)

Use as laboratory reagent.

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SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Occupational exposure limit values

CAS No	Name of agent	ppm	mg/m ³	fib/cm ³	Category	Origin
7782-50-5	Chlorine	0.5	1.5		STEL (15 min)	

DNEL/DMEL values

CAS No	Name of agent	Exposure route	Effect	Value
7681-52-9	sodium hypochlorite			
Worker DNEL, long-term		inhalation	systemic	1,55 mg/m ³
Worker DNEL, acute		inhalation	systemic	3,1 mg/m ³
Worker DNEL, long-term		dermal	local	0,5 %
Consumer DNEL, long-term		inhalation	local	1,55 mg/m ³
Consumer DNEL, acute		inhalation	systemic	3,1 mg/m ³
Consumer DNEL, long-term		oral	systemic	0,26 mg/kg bw/day

PNEC values

CAS No	Name of agent	Value
7681-52-9	sodium hypochlorite	
Freshwater		0,00021 mg/l
Marine water		0,000042 mg/l
Secondary poisoning		11,1 mg/kg
Micro-organisms in sewage treatment plants (STP)		4,69 mg/l

8.2. Exposure controls

Appropriate engineering controls

Provide adequate ventilation as well as local exhaust at critical locations. Provide washing facilities at the workplace, provide an eye shower or eyewash bottle and mark them.

Individual protection measures, such as personal protective equipment

Eye/face protection

Wear eye protection/face protection. Safety glasses according to EN 166.

Hand protection

When handling with chemical substances, protective gloves must be worn with the CE-label including the four control digits. The quality of the protective gloves resistant to chemicals must be chosen as a function of the specific working place concentration and quantity of hazardous substances. For special purposes, it is recommended to check the resistance to chemicals of the protective gloves mentioned above together with the supplier of these gloves. Protective gloves according to EN 374. Suitable glove material also for longer, direct contact: PVC (Polyvinyl chloride). NBR (Nitrile rubber). CR (polychloroprenes, Chloroprene rubber). Butyl rubber. fluoroelastomer (FKM). Breakthrough time (maximum wearing time): >480 min.

Skin protection

Use of protective clothing. Lab apron. Personal protective equipment must be determined according to the quantity and concentration of hazardous substances at the workplace. Wear solvent-resistant protective clothing.

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Respiratory protection

In case of inadequate ventilation wear respiratory protection.

Environmental exposure controls

Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.

SECTION 9: Physical and chemical properties**9.1. Information on basic physical and chemical properties**

Physical state:	Liquid	
Colour:	slightly yellowish	
Odour:	weak Chlorine (Cl ₂).	
Melting point/freezing point:		not determined
Boiling point or initial boiling point and boiling range:		100 °C
Flammability:		not applicable
Lower explosion limits:		not determined
Upper explosion limits:		not determined
Flash point:		not determined
Auto-ignition temperature:		not determined
Decomposition temperature:		not determined
pH-Value (at 20 °C):		9-10
Viscosity / kinematic:		not determined
Water solubility:		easily soluble
(at 20 °C)		
Solubility in other solvents		
not determined		
Partition coefficient n-octanol/water:		not determined
Vapour pressure:		23 hPa
(at 20 °C)		
Density (at 20 °C):		1,01 g/cm ³
Relative vapour density:		not determined
Particle characteristics:		not applicable

9.2. Other information**Information with regard to physical hazard classes****Explosive properties**

The product is not: Explosive.

Self-ignition temperature

Solid:

not applicable

Gas:

not applicable

Oxidizing properties

Not oxidising.

Other safety characteristics

Evaporation rate:

not determined

SECTION 10: Stability and reactivity**10.1. Reactivity**

Reaction with: Acid. No hazardous reaction when handled and stored according to provisions.

10.2. Chemical stability

The product is stable under storage at normal ambient temperatures. Decomposes when heated, releasing oxygen, dichloroxide, chlorine or hydrogen chloride.

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10.3. Possibility of hazardous reactions

Exothermic reaction with: Acids Oxidizing agents.

10.4. Conditions to avoid

UV-radiation/sunlight.

10.5. Incompatible materials

Do not mix with: Acids. Information is given in subsection 10.3.

10.6. Hazardous decomposition products

Resulting from the use of the product: Chlorine. Contact with acids liberates toxic gas. Decomposes when heated, releasing oxygen, dichloroxide, chlorine or hydrogen chloride.

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.

ATEmix calculated

ATE (oral) > 2000 mg/kg; ATE (dermal) > 2000 mg/kg; ATE (inhalation vapour) > 20 mg/l; ATE (inhalation dust/mist) > 5 mg/l

CAS No	Chemical name				
	Exposure route	Dose	Species	Source	Method
7681-52-9	sodium hypochlorite				
	dermal	LD50 mg/kg	20000	Rabbit	suppliers SDS.

Irritation and corrosivity

Skin corrosion/irritation: Based on available data, the classification criteria are not met.

Serious eye damage/eye irritation: Based on available data, the classification criteria are not met.

Sensitising effects

Based on available data, the classification criteria are not met.

Carcinogenic/mutagenic/toxic effects for reproduction

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**

This product does not contain a substance that has endocrine disrupting properties with respect to humans as no components meets the criteria.

SECTION 12: Ecological information**12.1. Toxicity**

Harmful to aquatic life with long lasting effects.

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CAS No	Chemical name					
	Aquatic toxicity	Dose	[h] [d]	Species	Source	Method
7681-52-9	sodium hypochlorite					
	Acute fish toxicity	LC50 0,06 mg/l	96 h	Oncorhynchus mykiss (Rainbow trout)	suppliers SDS.	
	Acute algae toxicity	ErC50 0,036 mg/l	72 h		suppliers SDS.	
	Acute crustacea toxicity	EC50 0,141 mg/l	48 h	Daphnia magna (Big water flea)	suppliers SDS.	
	Fish toxicity	NOEC 0,04 mg/l	28 d	Menidia peninsulae (tidal silverside)	suppliers SDS.	
	Crustacea toxicity	NOEC 0,007 mg/l	15 d	American oyster (Crassostrea virginica)	suppliers SDS.	
	Acute bacteria toxicity	EC50 >3 mg/l ()	3 h	Activated sludge	suppliers SDS.	

12.2. Persistence and degradability

The product has not been tested.

12.3. Bioaccumulative potential

The product has not been tested.

Partition coefficient n-octanol/water

CAS No	Chemical name	Log Pow
7681-52-9	sodium hypochlorite	-3,42

12.4. Mobility in soil

The product has not been tested.

12.5. Results of PBT and vPvB assessment

The substances in the mixture do not meet the PBT/vPvB criteria according to REACH, annex XIII.

12.6. Endocrine disrupting properties

This product does not contain a substance that has endocrine disrupting properties with respect to non-target organisms as no components meets the criteria.

12.7. Other adverse effects

The product has not been tested.

Further information

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

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Disposal recommendations

Do not allow to enter into surface water or drains. Do not allow to enter into soil/subsoil. Dispose of waste according to applicable legislation.

List of Wastes Code - residues/unused products

160506 WASTES NOT OTHERWISE SPECIFIED IN THE LIST; gases in pressure containers and discarded chemicals; laboratory chemicals, consisting of or containing hazardous substances, including mixtures of laboratory chemicals; hazardous waste

List of Wastes Code - used product

160506 WASTES NOT OTHERWISE SPECIFIED IN THE LIST; gases in pressure containers and discarded chemicals; laboratory chemicals, consisting of or containing hazardous substances, including mixtures of laboratory chemicals; hazardous waste

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List of Wastes Code - contaminated packaging

150110 WASTE PACKAGING; ABSORBENTS, WIPING CLOTHS, FILTER MATERIALS AND PROTECTIVE CLOTHING NOT OTHERWISE SPECIFIED; packaging (including separately collected municipal packaging waste); packaging containing residues of or contaminated by hazardous substances; hazardous waste

Contaminated packaging

Non-contaminated packages may be recycled. Handle contaminated packages in the same way as the substance itself.

SECTION 14: Transport information**Land transport (ADR/RID)**

14.1. UN number or ID number:	No dangerous good in sense of this transport regulation.
14.2. UN proper shipping name:	No dangerous good in sense of this transport regulation.
14.3. Transport hazard class(es):	No dangerous good in sense of this transport regulation.
14.4. Packing group:	No dangerous good in sense of this transport regulation.

Inland waterways transport (ADN)

14.1. UN number or ID number:	No dangerous good in sense of this transport regulation.
14.2. UN proper shipping name:	No dangerous good in sense of this transport regulation.
14.3. Transport hazard class(es):	No dangerous good in sense of this transport regulation.
14.4. Packing group:	No dangerous good in sense of this transport regulation.

Marine transport (IMDG)

14.1. UN number or ID number:	No dangerous good in sense of this transport regulation.
14.2. UN proper shipping name:	No dangerous good in sense of this transport regulation.
14.3. Transport hazard class(es):	No dangerous good in sense of this transport regulation.
14.4. Packing group:	No dangerous good in sense of this transport regulation.

Air transport (ICAO-TI/IATA-DGR)

14.1. UN number or ID number:	No dangerous good in sense of this transport regulation.
14.2. UN proper shipping name:	No dangerous good in sense of this transport regulation.
14.3. Transport hazard class(es):	No dangerous good in sense of this transport regulation.
14.4. Packing group:	No dangerous good in sense of this transport regulation.

14.5. Environmental hazards

ENVIRONMENTALLY HAZARDOUS: No

14.6. Special precautions for user

No dangerous good in sense of this transport regulation.

14.7. Maritime transport in bulk according to IMO instruments

No dangerous good in sense of this transport regulation.

SECTION 15: Regulatory information**15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture****EU regulatory information**

Restrictions on use (REACH, annex XVII):

Entry 3, Entry 75

Information according to Directive 2012/18/EU (SEVESO III):	Not subject to 2012/18/EU (SEVESO III)
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Additional information

This preparation is hazardous in the sense of regulation (EC) No 1272/2008 [GHS].

National regulatory information

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Employment restrictions:

Observe restrictions to employment for juveniles according to the 'juvenile work protection guideline' (94/33/EC).

Water hazard class (D):

2 - obviously hazardous to water

15.2. Chemical safety assessment

For the following substances of this mixture a chemical safety assessment has been carried out:
sodium hypochlorite

SECTION 16: Other information**Changes**

This data sheet contains changes from the previous version in section(s): 1,2,3,4,5,6,7,8,9,10,11,12,13,15,16.

Rev. 2,00, 14.06.2023; Individual safety data sheet based on 12871_collect

Rev, 2,1; 29.06.2023; general adjustment(s).

Rev. 2,2; 07.01.2025; general adjustment(s).

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Abbreviations and acronyms

Met. Corr: Substance or mixture corrosive to metals
 Skin Corr: Skin corrosion
 Eye Dam: Eye damage
 STOT SE: Specific target organ toxicity - single exposure
 Aquatic Acute: Acute aquatic hazard
 Aquatic Chronic: Chronic aquatic hazard
 CLP: Classification, labelling and Packaging
 REACH: Registration, Evaluation and Authorization of Chemicals
 GHS: Globally Harmonised System of Classification, Labelling and Packaging of Chemicals
 UN: United Nations
 CAS: Chemical Abstracts Service
 DNEL: Derived No Effect Level
 DMEL: Derived Minimal Effect Level
 PNEC: Predicted No Effect Concentration
 ATE: Acute toxicity estimate
 LC50: Lethal concentration, 50%
 LD50: Lethal dose, 50%
 LL50: Lethal loading, 50%
 EL50: Effect loading, 50%
 EC50: Effective Concentration 50%
 ErC50: Effective Concentration 50%, growth rate
 NOEC: No Observed Effect Concentration
 BCF: Bio-concentration factor
 PBT: persistent, bioaccumulative, toxic
 vPvB: very persistent, very bioaccumulative
 ADR: Accord européen sur le transport des marchandises dangereuses par Route
 (European Agreement concerning the International Carriage of Dangerous Goods by Road)
 RID: Regulations concerning the international carriage of dangerous goods by rail
 ADN: European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways
 (Accord européen relatif au transport international des marchandises dangereuses par voies de navigation intérieures)
 IMDG: International Maritime Code for Dangerous Goods
 EmS: Emergency Schedules
 MFAG: Medical First Aid Guide
 IATA: International Air Transport Association
 ICAO: International Civil Aviation Organization
 MARPOL: International Convention for the Prevention of Marine Pollution from Ships
 IBC: Intermediate Bulk Container
 SVHC: Substance of Very High Concern
 For abbreviations and acronyms, see table at <http://abbrev.esdscom.eu>
 For abbreviations and acronyms, see: ECHA Guidance on information requirements and chemical safety assessment, chapter R.20 (Table of terms and abbreviations).
 EC/EEC: European Community/European Economic Community
 EU: European Union
 M-factor: Multiplying factor
 IATA: International Air Transport Association
 DGR: Dangerous Goods Regulations
 ICAO: International Civil Aviation Organization
 TI: Technical Instructions

Classification for mixtures and used evaluation method according to Regulation (EC) No 1272/2008 [CLP]

Classification	Classification procedure
Aquatic Chronic 3; H412	Calculation method

Relevant H and EUH statements (number and full text)

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H290	May be corrosive to metals.
H314	Causes severe skin burns and eye damage.
H318	Causes serious eye damage.
H335	May cause respiratory irritation.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.
H412	Harmful to aquatic life with long lasting effects.
EUH031	Contact with acids liberates toxic gas.

Further Information

The information is based on the present level of our knowledge. It does not, however, give assurance of product properties and establishes no contract legal rights. The receiver of our product is singularly responsible for adhering to existing laws and regulations. The information is based on the present level of our knowledge. It does not, however, give assurance of product properties and establishes no contract legal rights. The receiver of our product is singularly responsible for adhering to existing laws and regulations.

(The data for the relevant ingredients were taken respectively from the last version of the sub-contractor's safety data sheet.)