

**Safety Data Sheet**

according to UK REACH Regulation

**Sodium Hypochlorite 0.5 %**

Revision date: 29.06.2023

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****GB CLP Regulation**

Aquatic Chronic 3; H412

Full text of hazard statements: see SECTION 16.

**2.2. Label elements****GB CLP Regulation****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****3.2. Mixtures**

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**Hazardous components**

CAS No	Chemical name			Quantity
	EC No	Index No	REACH No	
	Classification (GB CLP Regulation)			
7681-52-9	sodium hypochlorite			< 1 %
	231-668-3	017-011-00-1	01-2119488154-34	
	Skin Corr. 1B, Eye Dam. 1, Aquatic Acute 1, Aquatic Chronic 1; H314 H318 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; oral: LD50 = 1100 mg/kg Aquatic Acute 1; H400: M=10 Aquatic Chronic 1; H410: M=1 EUH; EUH031: >= 5 - 100		

**Further Information**

This product 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**

Rinse mouth immediately and drink 1 glass of water. If accidentally swallowed rinse the mouth with plenty of water (only if the person is conscious) and obtain immediate medical attention. Do NOT induce vomiting. Call a physician immediately.

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

SECTION 11: Toxicological information

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

Treat symptomatically. No specific antidote known.

**SECTION 5: Firefighting measures**
**5.1. Extinguishing media**
**Suitable extinguishing media**

Co-ordinate fire-fighting measures to the fire surroundings. Suitable: Carbon dioxide (CO<sub>2</sub>), alcohol-resistant foam, dry extinguishing agent, water spray. Adjust extinguishing measures to the environment.

**Unsuitable extinguishing media**

Unsuitable: Do not use water in full jet.

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#### **5.2. Special hazards arising from the substance or mixture**

Non-flammable. In case of fire may be liberated: Chlorine (Cl<sub>2</sub>). 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.

Dispose of waste according to applicable legislation.

### SECTION 6: Accidental release measures

#### **6.1. Personal precautions, protective equipment and emergency procedures**

##### **General advice**

Use personal protection equipment. Provide adequate ventilation. Avoid all contact with the substance.

#### **6.2. Environmental precautions**

Do not allow to enter into surface water or drains.

#### **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. Due to gaseous decomposition products, overpressure can occur in tightly sealed containers. No metal containers. Keep only in the original container at temperature not exceeding 15 °C.

##### **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**
**Exposure limits (EH40)**

CAS No	Substance	ppm	mg/m <sup>3</sup>	fibres/ml	Category	Origin
1310-73-2	Sodium hydroxide	-	2		STEL (15 min)	WEL

**DNEL/DMEL values**

CAS No	Substance	Exposure route	Effect	Value
7681-52-9	sodium hypochlorite			
	Worker DNEL, long-term	inhalation	systemic	1,55 mg/m <sup>3</sup>
	Worker DNEL, acute	inhalation	systemic	3,1 mg/m <sup>3</sup>
	Worker DNEL, long-term	dermal	local	0,5 %
	Consumer DNEL, long-term	inhalation	local	1,55 mg/m <sup>3</sup>
	Consumer DNEL, acute	inhalation	systemic	3,1 mg/m <sup>3</sup>
	Consumer DNEL, long-term	oral	systemic	0,26 mg/kg bw/day
1310-73-2	Sodium hydroxide			
	Worker DNEL, long-term	inhalation	local	1 mg/m <sup>3</sup>
	Consumer DNEL, long-term	inhalation	local	1 mg/m <sup>3</sup>

**PNEC values**

CAS No	Substance	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/face protection. Wear eye/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

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quantity and concentration of hazardous substances at the workplace. Wear solvent-resistant protective clothing. Safety shoes according to EN 345-347.

**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:	colourless slightly yellowish	
Odour:	weak Chlorine (Cl <sub>2</sub> ).	
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):		11-11,4
Water solubility:		easily soluble
Solubility in other solvents		
not determined		
Partition coefficient n-octanol/water:		not determined
Vapour pressure:		not determined
Density:		1,00 g/cm <sup>3</sup>
Relative vapour density:		not determined

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

The product is not: Explosive. 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. Decomposes when heated, releasing oxygen, dichloroxide, chlorine or hydrogen chloride.

**10.2. Chemical stability**

The product is stable under storage at normal ambient temperatures.

**10.3. Possibility of hazardous reactions**

Exothermic reaction with: Acids Oxidizing agents.

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**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 GB CLP Regulation**
**Acute toxicity**

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

**ATEmix calculated**

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

CAS No	Chemical name				
	Exposure route	Dose	Species	Source	Method
7681-52-9	sodium hypochlorite				
	oral	LD50 mg/kg 1100	Rat	suppliers SDS.	
	dermal	LD50 mg/kg 20000	Rabbit	suppliers SDS.	

**Irritation and corrosivity**

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**

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 mg/l	0,06	96 h	Oncorhynchus mykiss (Rainbow trout)	suppliers SDS.
	Acute algae toxicity	ErC50 mg/l	0,036	72 h		suppliers SDS.
	Acute crustacea toxicity	EC50 mg/l	0,141	48 h	Daphnia magna (Big water flea)	suppliers SDS.
	Fish toxicity	NOEC mg/l	0,04	28 d	Menidia peninsulae (tidal silverside)	suppliers SDS.
	Crustacea toxicity	NOEC mg/l	0,007	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**

Bioaccumulation is not expected.

**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 UK REACH.

**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.

**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.

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**Inland waterways transport (ADN)**

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

**Marine transport (IMDG)**

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

**Air transport (ICAO-TI/IATA-DGR)**

<b>14.1. UN number or ID number:</b>	No dangerous good in sense of this transport regulation.
<b>14.2. UN proper shipping name:</b>	No dangerous good in sense of this transport regulation.
<b>14.3. Transport hazard class(es):</b>	No dangerous good in sense of this transport regulation.
<b>14.4. Packing group:</b>	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 2012/18/EU (SEVESO III): Not subject to 2012/18/EU (SEVESO III)

**National regulatory information**

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

Water hazard class (D): 1 - slightly 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): 2,3,6,7,9,11,12,15,16.

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

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



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**Abbreviations and acronyms**

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).  
 Met. Corr: Corrosive to metals  
 Skin Corr: Skin corrosion  
 Eye Dam: Eye damage  
 Aquatic Acute: Acute aquatic hazard  
 Aquatic Chronic: Chronic aquatic hazard

**Classification for mixtures and used evaluation method according to GB CLP Regulation**

Classification	Classification procedure
Aquatic Chronic 3; H412	Calculation method

**Relevant H and EUH statements (number and full text)**

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.  
 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

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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 hazardous ingredients were taken respectively from the last version of the sub-contractor's safety data sheet.)*