

Safety Data Sheet

according to UK REACH Regulation

Sodium hypochlorite 1%

Revision date: 29.06.2023

Product code: 13794.xxxxx

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

1.1. Product identifier

Sodium hypochlorite 1%

UFI: N967-T1R6-W00R-DCE0

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. 142/144
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:

Poison Information Center Mainz, Germany, Tel: +49(0)6131/19240

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

GB CLP Regulation

Skin Irrit. 2; H315
Eye Irrit. 2; H319
Aquatic Chronic 3; H412

Full text of hazard statements: see SECTION 16.

2.2. Label elements

GB CLP Regulation

Signal word: Warning

Pictograms:



Hazard statements

H315 Causes skin irritation.
H319 Causes serious eye irritation.
H412 Harmful to aquatic life with long lasting effects.

Precautionary statements

P273 Avoid release to the environment.
P280 Wear protective gloves/protective clothing/eye protection/face protection.
P332+P313 If skin irritation occurs: Get medical advice/attention.
P337+P313 If eye irritation persists: Get medical advice/attention.

Labelling of packages where the contents do not exceed 125 ml

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Signal word:

Warning

Pictograms:



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

Hazardous components

CAS No	Chemical name			Quantity
	EC No	Index No	REACH No	
	Classification (GB CLP Regulation)			
7681-52-9	sodium hypochlorite			1 - < 5 %
	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 - < 5 %
		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

Provide fresh air. When in doubt or if symptoms are observed, get medical advice.

After contact with skin

After contact with skin, wash immediately with plenty of water and soap. If skin irritation occurs: Get medical advice/attention. Wash with plenty of water. Take off immediately all contaminated clothing and wash it before

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reuse. In all cases of doubt, or when symptoms persist, seek medical advice.

After contact with eyes

After contact with the eyes, rinse with water with the eyelids open for a sufficient length of time, then consult an ophthalmologist immediately. 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. Rinse mouth immediately and drink plenty of water. Do NOT induce vomiting. Call a physician immediately.

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

No information available.

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.

Unsuitable extinguishing media

Unsuitable: Do not use water in full jet.

5.2. Special hazards arising from the substance or mixture

Non-flammable. In case of fire may be liberated: Chlorine (Cl₂). Hydrogen chloride (HCl).

5.3. Advice for firefighters

Wear a self-contained breathing apparatus and chemical protective clothing.

Additional information

Suppress gases/vapours/mists with water spray jet. 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**

Provide adequate ventilation. Do not breathe gas/fumes/vapour/spray. Avoid contact with skin, eyes and clothes. Use personal protection equipment.

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.

Other information

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. Clear contaminated areas thoroughly.

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**

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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

Remove contaminated, saturated clothing immediately. Draw up and observe skin protection programme. Wash hands and face before breaks and after work and take a shower if necessary. 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. Avoid release to the environment.

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. Protect from light.

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.

SECTION 8: Exposure controls/personal protection
8.1. Control parameters
Exposure limits (EH40)

CAS No	Substance	ppm	mg/m ³	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 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
1310-73-2	Sodium hydroxide			
	Worker DNEL, long-term	inhalation	local	1 mg/m ³
	Consumer DNEL, long-term	inhalation	local	1 mg/m ³

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PNEC values

CAS No	Substance	
Environmental compartment		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

Suitable eye protection: goggles. 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. 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.

Skin protection

Use of protective clothing. Personal protective equipment must be determined according to the quantity and concentration of hazardous substances at the workplace. Wear solvent-resistant protective clothing. Take off immediately all contaminated clothing and wash it before reuse.

Respiratory protection

In case of inadequate ventilation wear respiratory protection.

Environmental exposure controls

No special measures are necessary.

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

Physical state:	Liquid	
Colour:	colourless slightly yellowish	
Odour:	weak nach Chlorine (Cl ₂).	
Melting point/freezing point:		not determined
Boiling point or initial boiling point and boiling range:		100 °C

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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):	11,0-11,4
Water solubility:	easily soluble
Solubility in other solvents	not determined
Partition coefficient n-octanol/water:	not determined
Vapour pressure:	23 hPa
(at 20 °C)	
Vapour pressure:	123 hPa
(at 50 °C)	
Density:	1,00 g/cm ³
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**

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.

10.4. Conditions to avoid

UV-radiation/sunlight.

10.5. Incompatible materials

Information is given in subsection 10.3.

10.6. Hazardous decomposition products

Resulting from the use of the product: Chlorine. 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.

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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					
	oral	LD50 mg/kg	1100	Rat	suppliers SDS.	
	dermal	LD50 mg/kg	20000	Rabbit	suppliers SDS.	

Irritation and corrosivity

Causes skin irritation.

Causes serious eye irritation.

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.

Further information

The mixture is classified as hazardous according to regulation (EC) No 1272/2008 [CLP].

SECTION 12: Ecological information
12.1. Toxicity

Harmful to aquatic life with long lasting effects.

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

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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.

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.

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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):

2 - obviously hazardous to water

15.2. Chemical safety assessmentFor 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): 1,2,3,4,5,6,7,8,9,11,12,13,15,16.

Rev. 1,00; 06.04.2020 - Initial release.

Rev. 1,1; 29.06.2023 - Adding the UFI code. Initial release.

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

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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).

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

Classification	Classification procedure
Skin Irrit. 2; H315	Calculation method
Eye Irrit. 2; H319	Calculation method
Aquatic Chronic 3; H412	Calculation method

Relevant H and EUH statements (number and full text)

H314	Causes severe skin burns and eye damage.
H315	Causes skin irritation.
H318	Causes serious eye damage.
H319	Causes serious eye 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 hazardous ingredients were taken respectively from the last version of the sub-contractor's safety data sheet.)