

Safety Data Sheet

according to Regulation (EC) No 1907/2006

Sodium hypochlorite solution approx. 10.5 g chlorine/l according to DIN 38405-24:1987, DEV D24

Revision date: 01.03.2023

Product code: 20672

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

1.1. Product identifier

Sodium hypochlorite solution approx. 10.5 g chlorine/l according to DIN 38405-24:1987, DEV D24

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

Use of the substance/mixture

Laboratory chemicals

Industrial uses: Uses of substances as such or in preparations at industrial sites

Professional uses: Public domain (administration, education, entertainment, services, craftsmen)

Uses advised against

Do not use for private purposes (household).

1.3. Details of the supplier of the safety data sheet

Company name:	AnalytiChem GmbH	
Street:	Stempelstraße 6	
Place:	D-47167 Duisburg	
Telephone:	0203/5194-0	Telefax: 0203/5194-290
e-mail:	info@analytichem.de	
Contact person:	Abteilung Produktsicherheit	Telephone: 0203/5194-107/117
e-mail:	produktsicherheit@analytichem.de	
Internet:	www.analytichem.de	
Responsible Department:	Abteilung Produktsicherheit	

1.4. Emergency telephone number:

For Hazardous Materials [or Dangerous Goods] Incidents Spill, Leak, Fire, Exposure, or Accident Call CHEMTREC Day or Night Within USA and Canada: 1-800-424-9300 Outside USA and Canada: +1 703-741-5970 (collect calls accepted)

Further Information

This product is a mixture. REACH Registration Number see section 3.

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Regulation (EC) No 1272/2008

Met. Corr. 1; H290

Skin Irrit. 2; H315

Eye Irrit. 2; H319

Aquatic Chronic 3; H412

Full text of hazard statements: see SECTION 16.

2.2. Label elements

Regulation (EC) No 1272/2008

Signal word: Warning

Pictograms:



Hazard statements

H290	May be corrosive to metals.
H315	Causes skin irritation.
H319	Causes serious eye irritation.

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H412 Harmful to aquatic life with long lasting effects.

Precautionary statements

P280 Wear protective gloves/protective clothing/eye protection/face protection.
P302+P352 IF ON SKIN: Wash with plenty of water.
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P337+P313 If eye irritation persists: Get medical advice/attention.
P390 Absorb spillage to prevent material damage.

2.3. Other hazards

No information available.

SECTION 3: Composition/information on ingredients

3.2. Mixtures

Chemical characterization

Mixtures in aqueous solution

Hazardous components

CAS No	Chemical name			Quantity
	EC No	Index No	REACH No	
	Classification (Regulation (EC) No 1272/2008)			
7681-52-9	sodium hypochlorite, solution			1 - < 5 %
	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, solution	1 - < 5 %
	inhalation: LC50 = > 10,5 mg/l (vapours); 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 does not contain substances of very high concern according to Regulation (EC) No 1907/2006 (REACH), Article 57 above the respective regulatory concentration limit of = 0.1 % (w/w).

SECTION 4: First aid measures

4.1. Description of first aid measures

General information

Take off immediately all contaminated clothing and wash it before reuse.

After inhalation

Provide fresh air.
If breathing is irregular or stopped, administer artificial respiration.
Call a physician immediately.

After contact with skin

Wash immediately with: Water
Take off immediately all contaminated clothing and wash it before reuse.
Call a physician immediately.

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After contact with eyes

In case of contact with eyes flush immediately with plenty of flowing water for 10 to 15 minutes holding eyelids apart and consult an ophthalmologist.

Remove contact lenses, if present and easy to do. Continue rinsing.

After ingestion

Rinse mouth immediately and drink plenty of water. Do NOT induce vomiting. Adverse human health effects and symptoms: Gastric perforation. Call a physician immediately. Do not allow a neutralisation agent to be drunk.

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

Skin corrosion/irritation

Dyspnoea

Cough

Risk of serious damage to eyes.

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

No data available

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media

Co-ordinate fire-fighting measures to the fire surroundings.

Unsuitable extinguishing media

no restriction

5.2. Special hazards arising from the substance or mixture

Non-combustible liquids

Hazardous combustion products

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.

Avoid contact with skin, eyes and clothes.

Additional information

Use water spray jet to protect personnel and to cool endangered containers.

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

Corrosive to metals.

For non-emergency personnel

Provide adequate ventilation.

Use personal protection equipment.

Avoid contact with skin, eyes and clothes.

Remove persons to safety.

Emergency procedures

Do not breathe dust/fume/gas/mist/vapours/spray.

For emergency responders

Precautionary statements For emergency responders : Personal protection equipment: see section 8

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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 containment

Cover drains.

Prevent spread over a wide area (e.g. by containment or oil barriers).

Collect in closed and suitable containers for disposal.

Absorb with liquid-binding material (sand, diatomaceous earth, acid- or universal binding agents).

For cleaning up

Clean contaminated articles and floor according to the environmental legislation.

Other information

Provide adequate ventilation.

Do not breathe dust/fume/gas/mist/vapours/spray.

Wear breathing apparatus if exposed to vapours/dusts/aerosols.

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

Do not breathe vapour/aerosol.

Read label before use.

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 or drink.

Further information on handling

Take off immediately all contaminated clothing and wash it before reuse.

If handled uncovered, arrangements with local exhaust ventilation have to be used.

Draw up and observe skin protection programme. Wash hands before breaks and after work.

7.2. Conditions for safe storage, including any incompatibilities

Requirements for storage rooms and vessels

Provide adequate ventilation as well as local exhaustion at critical locations.

Keep cool. Protect from sunlight.

storage temperature: +2°C - +8°C

Hints on joint storage

Keep away from: Acid, Heat

Further information on storage conditions

Keep in a cool, well-ventilated place.

Unsuitable container/equipment material: Metal

Protect against: Light, Heat

7.3. Specific end use(s)

Laboratory chemicals

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SECTION 8: Exposure controls/personal protection

8.1. Control parameters

DNEL/DMEL values

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

PNEC values

CAS No	Substance	Value
7681-52-9	sodium hypochlorite, solution	
Freshwater		0,00021 mg/l
Freshwater (intermittent releases)		0,00026 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

Technical measures and the application of suitable work processes have priority over personal protection equipment.

If handled uncovered, arrangements with local exhaust ventilation have to be used.

Do not breathe gas/fumes/vapour/spray.

Individual protection measures, such as personal protective equipment

Eye/face protection

Suitable eye protection: goggles.

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 are recommended Company KCL GmbH, D-36124 Eichenzell, email: vertrieb@kcl.de With

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specification (test according to EN374):

By long-term hand contact

Trade name/designation: KCL 741 Dermatril® L
Recommended material: NBR (Nitrile rubber) 0,11 mm
Wearing time with permanent contact: > 480 min

By short-term hand contact

Trade name/designation: KCL 741 Dermatril® L
Recommended material: NBR (Nitrile rubber) 0,11 mm
Wearing time with occasional contact (splashes): > 480 min

The breakthrough times stated above were determined by KCL in laboratory tests acc. to EN374 with samples of the recommended glove types. This recommendation applies only to the product stated in the safety data sheet (>, <) supplied by us and for the designated use. When dissolving in or mixing with other substances and under conditions deviating from those stated in EN374 please contact the supplier of CE-approved gloves (e.g. KCL GmbH, D-36124 Eichenzell, Internet: www.kcl.de).

Skin protection

Wear suitable protective clothing.

Respiratory protection

Respiratory protection necessary at: aerosol or mist formation
Filtering device with filter or ventilator filtering device of type: B-(P3)

Environmental exposure controls

Do not allow to enter into surface water or drains.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state:	Liquid	
Colour:	yellow - green	
Odour:	characteristic	
Odour threshold:	No data available	
Melting point/freezing point:		No data available
Boiling point or initial boiling point and boiling range:		No data available
Flammability:		not applicable not applicable
Lower explosion limits:		not determined
Upper explosion limits:		not determined
Flash point:		X
Auto-ignition temperature:		No data available
Decomposition temperature:		not determined
pH-Value:		alkaline
Viscosity / kinematic:		No data available
Water solubility:		easily soluble
Solubility in other solvents		
not determined		
Partition coefficient n-octanol/water:		not determined
Vapour pressure:		No data available
Vapour pressure:		No data available
Density (at 20 °C):		1,01638 g/cm³

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Bulk density: No data available
Relative vapour density: not determined

9.2. Other information

Information with regard to physical hazard classes

Sustaining combustion: No data available
Self-ignition temperature
Solid: not applicable
Gas: not applicable
Oxidizing properties
Not oxidising.

Other safety characteristics

Evaporation rate: not determined
Solvent separation test: not determined
Solvent content: not determined
Solid content: not determined
Sublimation point: No data available
Softening point: No data available
Pour point: No data available
No data available:
Viscosity / dynamic: No data available
Flow time: No data available

Further Information

Corrosive to metals.

SECTION 10: Stability and reactivity

10.1. Reactivity

Corrosive to metals.

10.2. Chemical stability

Protect against:
Light
Air
Heat

10.3. Possibility of hazardous reactions

Acid, Hydrochloric acid
Chlorine (Cl₂), Nitric acid
arsenic, Formic acid
Ammonia (NH₃), Acetic anhydride
Methanol, Oxidizing agent
Reducing agent

10.4. Conditions to avoid

Light
Air
Heat
Handle with care - avoid bumps, friction and impact.

10.5. Incompatible materials

Metal
copper, nickel, Iron.

10.6. Hazardous decomposition products

In case of fire may be liberated:

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SECTION 5: Firefighting measures

Further information

No data available

SECTION 11: Toxicological information

11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008

Toxicokinetics, metabolism and distribution

There are no data available on the mixture itself.

Acute toxicity

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

If swallowed danger of perforation of the esophagus and the stomach (strong corrosive effects).

Pulmonary oedema

CAS No	Chemical name				
	Exposure route	Dose	Species	Source	Method
7681-52-9	sodium hypochlorite, solution				
	oral	LD50 1100 mg/kg	Rat	Study report (1981)	OECD Guideline 401
	dermal	LD50 > 20000 mg/kg	Rabbit	Study report (1978)	OECD Guideline 402
	inhalation (1 h) vapour	LC50 > 10,5 mg/l	Rat	Study report (1962)	OECD Guideline 403

Irritation and corrosivity

Causes skin irritation.

Causes serious eye irritation.

Risk of serious damage to eyes.

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.

Specific effects in experiment on an animal

There are no data available on the mixture itself.

Additional information on tests

There are no data available on the mixture itself.

Practical experience

There are no data available on the mixture itself.

11.2. Information on other hazards

Other information

There are no data available on the mixture itself.

Further information

Skin corrosion/irritation

Dyspnoea

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Cough

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

There are no data available on the mixture itself.

CAS No	Chemical name					
	Aquatic toxicity	Dose	[h] [d]	Species	Source	Method
7681-52-9	sodium hypochlorite, solution					
	Acute fish toxicity	LC50 mg/l	0,05	96 h	different fish species	Publication (1978) Public available literature. No guidelin
	Acute algae toxicity	ErC50 mg/l	0,036	72 h	Pseudokirchneriella subcapitata	Study report (2013) OECD Guideline 201
	Acute crustacea toxicity	EC50 mg/l	0,141	48 h	Daphnia magna	Study report (2009) OECD Guideline 202
	Fish toxicity	NOEC mg/l	0,062	15 d	Brevoortia tyrannus	Publication (1980) Organisms were exposed to cooling waters
	Crustacea toxicity	NOEC mg/l	0,015	21 d	V. iris	Environmental Toxicology and Chemistry, 21 d long-term toxicity to mussel test.
	Acute bacteria toxicity	(EC50 mg/l)	563	3 h	activated sludge of a predominantly domestic sewage	Study report (2013) OECD Guideline 209

12.2. Persistence and degradability

There are no data available on the mixture itself.

12.3. Bioaccumulative potential

There are no data available on the mixture itself.

Partition coefficient n-octanol/water

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

12.4. Mobility in soil

There are no data available on the mixture itself.

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.

There are no data available on the mixture itself.

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

Discharge into the environment must be avoided.

Further information

Do not allow to enter into surface water or drains.

SECTION 13: Disposal considerations**13.1. Waste treatment methods****Disposal recommendations**

Waste disposal according to directive 2008/98/EC, covering waste and dangerous waste.

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Do not allow to enter into surface water or drains.
Send to a physico-chemical treatment facility under observation of official regulations.
Do not mix with other wastes.

Contaminated packaging

The allocation of waste identity numbers/waste descriptions must be carried out according to the EEC, specific to the industry and process.

SECTION 14: Transport information

Land transport (ADR/RID)

14.1. UN number or ID number:	UN 1791
14.2. UN proper shipping name:	HYPOCHLORITE SOLUTION
14.3. Transport hazard class(es):	8
14.4. Packing group:	III
Hazard label:	8
Classification code:	C9
Special Provisions:	521
Limited quantity:	5 L
Excepted quantity:	E1
Transport category:	3
Hazard No:	80
Tunnel restriction code:	E

Inland waterways transport (ADN)

14.1. UN number or ID number:	UN 1791
14.2. UN proper shipping name:	HYPOCHLORITE SOLUTION
14.3. Transport hazard class(es):	8
14.4. Packing group:	III
Hazard label:	8
Classification code:	C9
Special Provisions:	521
Limited quantity:	5 L
Excepted quantity:	E1

Marine transport (IMDG)

14.1. UN number or ID number:	UN 1791
14.2. UN proper shipping name:	HYPOCHLORITE SOLUTION
14.3. Transport hazard class(es):	8
14.4. Packing group:	III
Hazard label:	8
Marine pollutant:	P
Special Provisions:	223, 274, 900
Limited quantity:	5 L
Excepted quantity:	E1
EmS:	F-A, S-B

Air transport (ICAO-TI/IATA-DGR)

14.1. UN number or ID number:	UN 1791
14.2. UN proper shipping name:	HYPOCHLORITE SOLUTION
14.3. Transport hazard class(es):	8
14.4. Packing group:	III
Hazard label:	8
Special Provisions:	A3 A803
Limited quantity Passenger:	1 L
Passenger LQ:	Y841

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Excepted quantity:	E1	
IATA-packing instructions - Passenger:		852
IATA-max. quantity - Passenger:		5 L
IATA-packing instructions - Cargo:		856
IATA-max. quantity - Cargo:		60 L

14.5. Environmental hazards

ENVIRONMENTALLY HAZARDOUS: No

14.6. Special precautions for user

Warning: strongly corrosive.

14.7. Maritime transport in bulk according to IMO instruments

not applicable

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

SECTION 16: Other information

Changes

This data sheet contains changes from the previous version in section(s): 2,15.

Abbreviations and acronyms

ADR: Accord européen sur le transport 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

GHS: Globally Harmonized System of Classification and Labelling of Chemicals

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service

LC50: Lethal concentration, 50%

LD50: Lethal dose, 50%

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

Classification	Classification procedure
Met. Corr. 1; H290	On basis of test data
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)

H290	May be corrosive to metals.
H314	Causes severe skin burns and eye damage.
H315	Causes skin irritation.

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H318	Causes serious eye damage.
H319	Causes serious eye irritation.
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 above information describes exclusively the safety requirements of the product and is based on our present-day knowledge. The information is intended to give you advice about the safe handling of the product named in this safety data sheet, for storage, processing, transport and disposal. The information cannot be transferred to other products. In the case of mixing the product with other products or in the case of processing, the information on this safety data sheet is not necessarily valid for the new made-up material.

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