SAFETY DATA SHEET

according
to GB/T 16483 and GB/T 17519

Version 8.1
Revision Date 02.11.2021
Print Date 27.11.2021
Date of first issue 02.11.2021

Sodium hypochlorite solution

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

1.1 Product identifiers

Product name : Sodium hypochlorite solution
CAS-No. : 7681-52-9

1.2 Details of the supplier of the safety data sheet

Company : ROSS CHEM COMPANY LIMITED.
No. 227.NanYi Road, Dongying City,
Shandong Province, China 257091

E-mail: :info@rosschem.com
Web site :https://rosschem.com
Telephone : +86 546 8275057
Fax : +86 546 8275058

1.3 Emergency telephone

Emergency Phone # : +86 546 8275057

1.4 Relevant identified uses of the substance or mixture and uses advised against

Identified uses : For R&D use only. Not for pharmaceutical, household or other uses.

SECTION 2: Hazards identification

Causes skin irritation., Causes serious eye damage., Very toxic to aquatic life., Toxic to aquatic life with long lasting effects. Show this material safety data sheet to the doctor in attendance. After inhalation: fresh air. In case of skin contact: Take off immediately all contaminated clothing. Rinse skin with water/ shower. After eye contact: rinse out with plenty of water., Immediately call in ophthalmologist., Remove contact lenses. After swallowing: immediately make victim drink water (two glasses at most)., Consult a physician. Not combustible. Ambient fire may liberate hazardous vapours. Violent reactions possible with: The generally known reaction partners of water.

Summary of emergency

2.1 GHS Classification

Skin corrosion/irritation (Category 2), H315
Serious eye damage/eye irritation (Category 1), H318
Short-term (acute) aquatic hazard (Category 1), H400
Long-term (chronic) aquatic hazard (Category 2), H411

For the full text of the H-Statements mentioned in this Section, see Section 16.

2.2 GHS Label elements, including precautionary statements

Pictogram

Signal word: Danger

Hazard statement(s)

H315	Causes skin irritation.
H318	Causes serious eye damage.
H400	Very toxic to aquatic life.
H411	Toxic to aquatic life with long lasting effects.

Precautionary statement(s)

Prevention

P264	Wash skin thoroughly after handling.
P273	Avoid release to the environment.
P280	Wear protective gloves/ eye protection/ face protection.

Response

P302 + P352	IF ON SKIN: Wash with plenty of water.
P305 + P351 + P338 + P310	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER/ doctor.
P332 + P313	If skin irritation occurs: Get medical advice/ attention.
P362 + P364	Take off contaminated clothing and wash it before reuse.
P391	Collect spillage.

Disposal

P501	Dispose of contents/ container to an approved waste disposal plant.

2.3 Physical and chemical hazards

Referring to current information, no physical or chemical hazard.

2.4 Health hazards

H315	Causes skin irritation.
H318	Causes serious eye damage.

2.5 Environmental hazards

H400	Very toxic to aquatic life.
H411	Toxic to aquatic life with long lasting effects.

2.6 Other hazards - none

SECTION 3: Composition/information on ingredients

Substance / Mixture : Mixture

3.2 Mixtures

Formula : ClNaO
Molecular weight : 74.44 g/mol

Hazardous ingredients

Component		Classification	Concentration
sodium hypochlorite			
CAS-No. EC-No. Index-No.	7681-52-9 231-668-3 017-011-00-1	Skin corrosion/irritation Category 1B; Serious eye damage/eye irritation Category 1; Specific target organ toxicity - single exposure Category 3; Short-term (acute) aquatic hazard Category 1; Long-term (chronic) aquatic hazard Category 1; H314, H318, H335, H400, H410 M-Factor - Aquatic Acute: 10 - Aquatic Chronic: 1	>= 3 - < 5 %

For the full text of the H-Statements mentioned in this Section, see Section 16.

SECTION 4: First aid measures

4.1 Description of first-aid measures

General advice
Show this material safety data sheet to the doctor in attendance.

If inhaled
After inhalation: fresh air.

In case of skin contact
In case of skin contact: Take off immediately all contaminated clothing. Rinse skin with water/ shower.

In case of eye contact
After eye contact: rinse out with plenty of water. Immediately call in ophthalmologist. Remove contact lenses.

If swallowed
After swallowing: immediately make victim drink water (two glasses at most). Consult a physician.

4.2 Most important symptoms and effects, both acute and delayed

The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11

4.3 Indication of any immediate medical attention and special treatment needed

No data available

4.4 Notes to physician

No data available

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Unsuitable extinguishing media

For this substance/mixture no limitations of extinguishing agents are given.

5.2 Special hazards arising from the substance or mixture

Chlorine

Hydrogen chloride gas
Sodium oxides
Hydrogen chloride gas
Sodium oxides
Not combustible.
Ambient fire may liberate hazardous vapours.

5.3 Advice for firefighters

Stay in danger area only with self-contained breathing apparatus. Prevent skin contact by keeping a safe distance or by wearing suitable protective clothing.
Suppress (knock down) gases/vapors/mists with a water spray jet. Prevent fire extinguishing water from contaminating surface water or the ground water system.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Advice for non-emergency personnel: Do not breathe vapors, aerosols. Avoid substance contact. Ensure adequate ventilation. Evacuate the danger area, observe emergency procedures, consult an expert.
For personal protection see section 8.

6.2 Environmental precautions

Do not let product enter drains.

6.3 Methods and materials for containment and cleaning up

Cover drains. Collect, bind, and pump off spills. Observe possible material restrictions (see sections 7 and 10). Take up with liquid-absorbent material (e.g. Chemizorb®). Dispose of properly. Clean up affected area.

6.4 Reference to other sections

For disposal see section 13.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

For precautions see section 2.2.

7.2 Conditions for safe storage, including any incompatibilities

Storage conditions

Tightly closed.

Storage stability

Recommended storage temperature

2 - 8 °C

Storage class
Storage class (TRGS 510): 12: Non Combustible Liquids

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Ingredients with workplace control parameters
Contains no substances with occupational exposure limit values.

8.2 Exposure controls

Appropriate engineering controls
Immediately change contaminated clothing. Apply preventive skin protection. Wash hands and face after working with substance.

Personal protective equipment

Eye/face protection
Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU). Tightly fitting safety goggles

Skin protection
Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

The selected protective gloves have to satisfy the specifications of Regulation (EU) 2016/425 and the standard EN 374 derived from it.

Full contact
Material : Nitrile rubber
Minimum layer thickness: 0.11 mm
Break through time: 480 min
Material tested:Dermatril® (KCL 740 / Aldrich Z677272, Size M)

Splash contact
Material : Nitrile rubber
Minimum layer thickness: 0.11 mm
Break through time: 480 min
Material tested:Dermatril® (KCL 740 / Aldrich Z677272, Size M)

data source: KCL GmbH, D-36124 Eichenzell, phone +49 (0)6659 87300, e-mail sales@kcl.de, test method: EN374
If used in solution, or mixed with other substances, and under conditions which differ from EN 374, contact the supplier of the EC approved gloves. This recommendation is advisory only and must be evaluated by an industrial hygienist and safety officer familiar with the specific situation of anticipated use by our customers. It should not be construed as offering an approval for any specific use scenario.

Body Protection
protective clothing

Respiratory protection
required when vapours/aerosols are generated.

Our recommendations on filtering respiratory protection are based on the following standards: DIN EN 143, DIN 14387 and other accompanying standards relating to the used respiratory protection system.

Control of environmental exposure
Do not let product enter drains.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

a)	Appearance	Form: liquid
b)	Odor	No data available
c)	Odor Threshold	No data available
d)	pH	No data available
e)	Melting point/freezing point	No data available
f)	Initial boiling point and boiling range	No data available
g)	Flash point	Not applicable
h)	Evaporation rate	No data available
i)	Flammability (solid, gas)	No data available
j)	Upper/lower flammability or explosive limits	No data available
k)	Vapor pressure	23.3 hPa at 20 °C
l)	Vapor density	No data available
m)	Density	1.097 g/mL at 25 °C
	Relative density	No data available
n)	Water solubility	at 20 °C soluble
o)	Partition coefficient: n-octanol/water	No data available
p)	Autoignition temperature	Not applicable
q)	Decomposition temperature	No data available
r)	Viscosity	Viscosity, kinematic: No data available Viscosity, dynamic: No data available
s)	Explosive properties	Not classified as explosive.
t)	Oxidizing properties	none

9.2 Other safety information
No data available

SECTION 10: Stability and reactivity

10.1 Chemical stability
The product is chemically stable under standard ambient conditions (room temperature) .

10.2 Possibility of hazardous reactions
Violent reactions possible with:
The generally known reaction partners of water.

10.3 Conditions to avoid
no information available

10.4 Incompatible materials
Acids

10.5 Hazardous decomposition products
In the event of fire: see section 5

SECTION 11: Toxicological information

11.1 Information on toxicological effects
Mixture

Acute toxicity
Symptoms: Irritations of mucous membranes in the mouth, pharynx, oesophagus and gastrointestinal tract.
Symptoms: Possible symptoms:, mucosal irritations
Dermal: No data available

Skin corrosion/irritation
Mixture causes skin irritation.

Serious eye damage/eye irritation
Mixture causes serious eye damage.

Respiratory or skin sensitization
No data available

Germ cell mutagenicity
No data available

Carcinogenicity
No data available

Reproductive toxicity
No data available

Specific target organ toxicity - single exposure
No data available

Specific target organ toxicity - repeated exposure
No data available

Aspiration hazard
No data available

11.2 Additional Information
Other dangerous properties can not be excluded.

Handle in accordance with good industrial hygiene and safety practice.

Components

sodium hypochlorite

Acute toxicity

LD50 Oral - Rat - male - 1,100 mg/kg
(OECD Test Guideline 401)
Inhalation: No data available

LD50 Dermal - Rabbit - male and female - > 20,000 mg/kg
(OECD Test Guideline 402)

Skin corrosion/irritation

Classified according to Regulation (EU) 1272/2008, Annex VI (Table 3.1/3.2)

Serious eye damage/eye irritation

Causes serious eye damage.

Respiratory or skin sensitization

- Guinea pig

Result: Not a skin sensitizer.
(OECD Test Guideline 406)

Germ cell mutagenicity

Result: negative
Method: Mutagenicity (micronucleus test)
Species: Mouse - male
Result: negative

Carcinogenicity

No data available

Reproductive toxicity

No data available

Specific target organ toxicity - single exposure

Remarks: No data available
May cause respiratory irritation.

Specific target organ toxicity - repeated exposure

No data available

Aspiration hazard

No data available

SECTION 12: Ecological information

12.1 Toxicity

Mixture

No data available

12.2 Persistence and degradability

No data available

12.3 Bioaccumulative potential

No data available

12.4 Mobility in soil
No data available

12.5 Results of PBT and vPvB assessment
PBT/vPvB assessment not available as chemical safety assessment not required/not conducted

12.6 Endocrine disrupting properties
No data available

12.7 Other adverse effects
No data available

Components

sodium hypochlorite

Toxicity to fish	LC50 - Pimephales promelas (fathead minnow) - 0.08 mg/l - 96 h Remarks: (Regulation (EC) No 1272/2008, Annex VI) (ECOTOX Database)
Toxicity to daphnia and other aquatic invertebrates	EC50 - Daphnia magna (Water flea) - 0.04 mg/l - 48 h Remarks: (Regulation (EC) No 1272/2008, Annex VI) (ECOTOX Database)
Toxicity to algae	static test ErC50 - Pseudokirchneriella subcapitata - 0.036 mg/l - 72 h (OECD Test Guideline 201) static test EC10 - Pseudokirchneriella subcapitata - 0.02 mg/l - 72 h (OECD Test Guideline 201)
Toxicity to bacteria	static test EC50 - activated sludge - 77.1 mg/l - 3 h (OECD Test Guideline 209) Remarks: (ECHA)

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Product

Offer surplus and non-recyclable solutions to a licensed disposal company.

SECTION 14: Transport information

14.1 UN number
ADR/RID: 3082 IMDG: 3082 IATA-DGR: 3082

14.2 UN proper shipping name
ADR/RID: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (sodium hypochlorite solution)

IMDG: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (sodium hypochlorite solution)

IATA-DGR: Environmentally hazardous substance, liquid, n.o.s. (sodium hypochlorite

solution)

14.3 Transport hazard class(es)

ADR/RID: 9 IMDG: 9 IATA-DGR: 9

14.4 Packaging group

ADR/RID: III IMDG: III IATA-DGR: III

14.5 Environmental hazards

ADR/RID: yes IMDG Marine pollutant: no IATA-DGR: yes

14.6 Special precautions for user

14.7 Incompatible materials

Acids

Further information

EHS-Mark required (ADR 2.2.9.1.10, IMDG code 2.10.3) for single packagings and combination packagings containing inner packagings with Dangerous Goods > 5L for liquids or > 5kg for solids.

SECTION 15: Regulatory information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

National regulatory information

Other regulations

Please pay attention on the waste treatment should also comply with local regulations requirement.

SECTION 16: Other information

Full text of H-Statements referred to under sections 2 and 3.

H314	Causes severe skin burns and eye damage.
H315	Causes skin irritation.
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.
H411	Toxic to aquatic life with long lasting effects.

Further information

The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product.