

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006, as amended

Honeywell

Sodium hypochlorite solution

425044-1L

Version 4.2

Revision Date 22.01.2024

Supersedes 3

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

1.1. Product identifier

Product name : Sodium hypochlorite solution
SDS-number : 000000020198
Type of product : Mixture
Remarks : SDS according to Art. 31 of Regulation (EC) 1907/2006.

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

Use of the Substance/Mixture : Laboratory chemicals
Uses advised against : none

1.3. Details of the supplier of the safety data sheet

Company	: Honeywell International Inc. 115 Tabor Road 07950-2546 Morris Plains USA	Honeywell International, Inc. 115 Tabor Road Morris Plains, NJ 07950-2546 USA
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Telephone :
For further information, please contact: : SafetyDataSheet@Honeywell.com

1.4. Emergency telephone number

Emergency telephone number : +1-703-527-3887 (ChemTrec-Transport)
+1-303-389-1414 (Medical)
: Poison Control Center:
United Kingdom: (+44) 844 892 0111

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

REGULATION (EC) No 1272/2008

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Corrosive to metals Category 1
H290 May be corrosive to metals.
Skin corrosion Category 1B
H314 Causes severe skin burns and eye damage.
Serious eye damage Category 1
H318 Causes serious eye damage.
Short-term (acute) aquatic hazard Category 1
H400 Very toxic to aquatic life.
Long-term (chronic) aquatic hazard Category 2
H411 Toxic to aquatic life with long lasting effects.

2.2. Label elements

REGULATION (EC) No 1272/2008

Hazard pictograms	:	
Signal word	:	Danger
Hazard statements	:	H290 May be corrosive to metals. H314 Causes severe skin burns and eye damage. H410 Very toxic to aquatic life with long lasting effects. EUH031 Contact with acids liberates toxic gas.
Precautionary statements	:	P260 Do not breathe dust/ fume/ gas/ mist/ vapours/ spray. P280 Wear protective gloves/protective clothing/eye protection/face protection. P284 In case of inadequate ventilation wear respiratory protection. P301 + P330 + P331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. P302 + P352 IF ON SKIN: Wash with plenty of water. P304 + P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing. P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P308 + P313 IF exposed or concerned: Get medical

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advice/ attention.

Hazardous components : sodium hypochlorite, solution
which must be listed on the
label

2.3. Other hazards

None known. Results of PBT and vPvB assessment, see chapter 12.5.

SECTION 3: Composition/information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Chemical name	CAS-No. Index-No. REACH Registration Number EC-No.	Classification 1272/2008	Concentration	Remarks
sodium hypochlorite, solution	7681-52-9 017-011-00-1 231-668-3	Skin Corr. 1B; H314 Eye Dam. 1; H318 STOT SE 3; H335; Respiratory system Aquatic Acute 1; H400 Aquatic Chronic 1; H410 EUH031	>= 5 % - < 15 %	M(Aquatic Acute) = 10 M(Aquatic Chronic) = 1 EUH031:>= 5 %

Remaining components of this product are non-hazardous and/or are present at concentrations below reportable limits.

Occupational Exposure Limit(s), if available, are listed in Section 8.
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:

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First aider needs to protect himself. Take off all contaminated clothing immediately.

Inhalation:

Remove to fresh air. If breathing is difficult, give oxygen. Use oxygen as required, provided a qualified operator is present. Call a physician immediately.

Skin contact:

Wash off immediately with plenty of water for at least 15 minutes. Take off contaminated clothing and shoes immediately. Wash contaminated clothing before re-use. Call a physician immediately.

Eye contact:

Protect unharmed eye. Irrigate eyes for at least 15 minutes with copious quantities of water, keeping eyelids apart and away from eyeballs during irrigation. Call a physician immediately.

Ingestion:

Rinse mouth with water. Do NOT induce vomiting. Call a physician immediately.

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

No data available

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

Treat symptomatically.

See Section 11 for more detailed information on health effects and symptoms.

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SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media:

Water spray

Foam

Carbon dioxide (CO₂)

Dry powder

Extinguishing media which shall not be used for safety reasons:

High volume water jet

5.2. Special hazards arising from the substance or mixture

Fire may cause evolution of:

Chlorine compounds

Hydrogen

Irritant gases/vapours

5.3. Advice for firefighters

In the event of fire and/or explosion do not breathe fumes.

Wear self-contained breathing apparatus and protective suit.

No unprotected exposed skin areas.

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. Do not use a solid water stream as it may scatter and spread fire. The product itself does not burn.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Ensure adequate ventilation. Keep people away from and upwind of spill/leak. Use personal protective equipment.

6.2. Environmental precautions

Do not flush into surface water or sanitary sewer system. Should not be released into the environment. Prevent further leakage or spillage if safe to do so.

6.3. Methods and materials for containment and cleaning up

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Soak up with inert absorbent material.
Pick for disposal in tightly closed containers

6.4. Reference to other sections

For personal protection see section 8.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Advice on safe handling:

Exhaust ventilation at the object is necessary. Do not breathe vapours or spray mist.

Advice on protection against fire and explosion:

Normal measures for preventive fire protection.

Hygiene measures:

Separate rooms are required for washing, showering and changing clothes. Take off all contaminated clothing immediately. Remove and wash contaminated clothing before re-use. Wash hands before breaks and at the end of workday. When using do not eat or drink.

7.2. Conditions for safe storage, including any incompatibilities

Further information on storage conditions:

Store in original container. Keep container tightly closed and in a well-ventilated place. Do not leave vessels/containers open. Protect against light. Recommended storage temperature: 15 - 25 °C.

Advice on common storage:

Do not store together with: Acids

7.3. Specific end use(s)

no additional data available

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SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Components with workplace control parameters

Contains no substances with occupational exposure limit values.

DNEL/ PNEC-Values

Component	End-use/impact	Exposure duration	Value	Exposure routes	Remarks
sodium hypochlorite, solution	Workers / Long-term systemic effects		1,55 mg/m3	Inhalation	
sodium hypochlorite, solution	Workers / Acute systemic effects		3,1 mg/m3	Inhalation	
sodium hypochlorite, solution	Workers / Long-term local effects		1,55 mg/m3	Inhalation	
sodium hypochlorite, solution	Workers / Acute local effects		3,1 mg/m3	Inhalation	
sodium hypochlorite, solution	Consumers / Long-term systemic effects		1,55 mg/m3	Inhalation	
sodium hypochlorite, solution	Consumers / Acute systemic effects		3,1 mg/m3	Inhalation	
sodium hypochlorite, solution	Consumers / Long-term systemic effects		1,55 mg/m3	Inhalation	
sodium hypochlorite, solution	Consumers / Acute local effects		3,1 mg/m3	Inhalation	

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sodium hypochlorite, solution	Consumers / Long-term systemic effects		0,26mg/kg bw/d	Ingestion	
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Component	Environmental compartment / Value	Remarks
sodium hypochlorite, solution	Fresh water: 0,00021 mg/l	Assessment factor: 10
sodium hypochlorite, solution	Marine water: 0,000042 mg/l	Assessment factor: 50
sodium hypochlorite, solution	Sewage treatment plant: 4,69 mg/kg	

8.2. Exposure controls

Occupational exposure controls

The Personal Protective Equipment must be in accordance with EN standards:respirator EN 136, 140, 149; safety glasses EN 166; protective suit: EN 340, 463, 468, 943-1, 943-2; gloves EN 374, 511; safety shoes EN-ISO 20345.

Ensure that eyewash stations and safety showers are close to the workstation location.

Do not breathe vapours or spray mist.

Engineering measures

Use with local exhaust ventilation.

Personal protective equipment

Respiratory protection:

In the case of vapour formation use a respirator with an approved filter.

Recommended Filter type:

Inorganic gas/vapour type

Hand protection:

Glove material: Nitrile rubber

Break through time: > 480 min

Glove thickness: 0,11 mm

Dermatril® P743

Gloves must be inspected prior to use.

Replace when worn.

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Remarks: Supplementary note: The specifications are based on information and tests from similar substances by analogy.
Due to varying conditions (e.g.temperature or other strains) it must be considered that the usage of a chemical protective glove in practice may be much shorter than the permeation time determined in accordance with EN 374.
Since actual conditions of practical use often deviate from standardised conditions according EN 374 the glove manufacturer recommends to use the chemical protective glove in practice not longer than 50% of the recommended permeation time.
Manufacturer's directions for use should be observed because of great diversity of types .
Suitable gloves tested according EN 374 are supplied e.g. from KCL GmbH, D-36124 Eichenzell, Vertrieb@kcl.de

Eye protection:
Safety goggles

Skin and body protection:
Impervious clothing

Environmental exposure controls

Handle in accordance with local environmental regulations and good industrial practices.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

- | | | |
|-------------------------------------|---|---|
| (a) Physical state | : | liquid |
| (b) Colour | : | clear |
| (c) Odour | : | No data available |
| (d) Melting point/freezing point | : | -30 - -20 °C |
| (e) Boiling point/boiling range | : | 111 °C |
| (g) Lower and upper explosion limit | : | Lower explosion limit
Not applicable |
| | : | Upper explosion limit
Not applicable |

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- (h) Flash point : Not applicable
- (i) Auto-ignition temperature : No data available
- (j) Decomposition temperature : No decomposition if used as directed.
- (k) pH : 11,5 - 13,5
- (l) Viscosity, kinematic : No data available
- (m) Solubility(ies) : Water solubility:
soluble
- (n) Partition coefficient: n-octanol/water : No data available
- (o) Vapour pressure : 23,3 hPa
at 20 °C
- (p) Density and / or relative density : 1,206 g/cm³
at 25 °C
- (q) Relative vapour density : No data available
- (r) Particle characteristics : No data available

9.2 Other Information

- Corrosive to metals : Corrosive to metals
- Evaporation rate : No data available
- Viscosity, dynamic : No data available

SECTION 10: Stability and reactivity

10.1. Reactivity

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Stable under normal conditions.

10.2. Chemical stability

No decomposition if used as directed.

10.3. Possibility of hazardous reactions

Corrosive in contact with metals
Exothermic reaction with strong acids.

10.4. Conditions to avoid

Protect from frost, heat and sunlight.

10.5. Incompatible materials

Metals
Reducing agents
Acids
Ammonia
Amines
Methanol

10.6. Hazardous decomposition products

Chlorine compounds

SECTION 11: Toxicological information

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

(a) Acute toxicity

Acute oral toxicity:
No data available

Acute dermal toxicity:
No data available

Acute inhalation toxicity:
No data available

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Acute toxicity (other routes of administration):

No data available

(b) Skin corrosion/irritation:

Classification based on Annex VI of regulation 1272/2008/EC.

(c) Serious eye damage/eye irritation:

Classification based on Annex VI of regulation 1272/2008/EC.

(d) Respiratory or skin sensitisation:

Buehler Test

Species: Guinea pig

Classification: non-sensitizing

Method: OECD Test Guideline 406

(f) Carcinogenicity:

Note: No data available

(h) STOT-single exposure:

No data available

(i) STOT - repeated exposure:

No data available

(j) Aspiration hazard:

No data available

11.2. Information on other hazards

Endocrine disrupting properties

No data available

Other information:

No data available

SECTION 12: Ecological information

12.1. Toxicity

Toxicity to fish:

LC50

flow-through test

Species: Oncorhynchus kisutch (coho salmon)

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Value: 0,032 mg/l
Exposure time: 96 h
Test substance: REACH dossier "read-across"
anhydrous substance

Toxicity to aquatic plants:

EC50
Growth rate
Species: Pseudokirchneriella subcapitata (green algae)
Value: < 0,05 mg actives Cl/l
Exposure time: 72 h
Method: OECD Test Guideline 201

EC50
static test
Species: Pseudokirchneriella subcapitata (green algae)
Value: < 0,03 mg actives Cl/l
Exposure time: 72 h
Method: OECD Test Guideline 201

Toxicity to aquatic invertebrates:

EC50
flow-through test
Species: Ceriodaphnia dubia (water flea)
Value: 0,035 mg actives Cl/l
Exposure time: 48 h
Method: OECD Test Guideline 202

EC50
flow-through test
Species: Daphnia magna (Water flea)
Value: 0,141 mg actives Cl/l
Exposure time: 48 h
Method: OECD Test Guideline 202

12.2. Persistence and degradability

Biodegradability:

The methods for determining biodegradability are not applicable to inorganic substances.

12.3. Bioaccumulative potential

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No data available

12.4. Mobility in soil

No data available

12.5. Results of PBT and vPvB assessment

Substance is not persistent, bioaccumulative, and toxic (PBT).
Substance is not very persistent and very bioaccumulative (vPvB).

12.6. Endocrine disrupting properties

No data available

12.7. Other adverse effects

No data available

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Product:

Dispose according to legal requirements.

Packaging:

Legal requirements are to be considered in regard of reuse or disposal of used packaging materials

Further information:

Provisions relating to waste:
EC Directive 2006/12/EC; 2008/98/EEC
Regulation No. 1013/2006
For personal protection see section 8.

SECTION 14: Transport information

14.1 UN number or ID number

ADR/RID:1791

IMDG:1791

IATA:1791

14.2 UN proper shipping name

ADR/RID:HYPOCHLORITE SOLUTION

IMDG:HYPOCHLORITE SOLUTION(SODIUM HYPOCHLORITE)

IATA:Hypochlorite solution

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14.3 Transport hazard class(es)

ADR/RID:8

IMDG: 8

IATA: 8

14.4 Packaging group

ADR/RID:II

IMDG: II

IATA: II

14.5 Environmental hazards

ADR/RID: yes

Marine pollutant: yes

14.6 Special precautions for user

IMDG Code segregation group (SGG8) - hypochlorites,
Incompatible with acids.

14.7 Maritime transport in bulk according to IMO instruments

No data available

SECTION 15: Regulatory information

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

Basis	Value	Remarks
Directive 2012/18/EC SEVESO III Listed in Regulation : E1: Hazardous to the aquatic environment	Quantity: 100.000 kg Quantity: 200.000 kg	
Substances of very high concern (SVHC)		This product does not contain substances of very high concern according to Regulation (EC) No Article 57 above the respective regulatory 1907/2006 (REACH), concentration limit of $\geq 0.1\%$ (w/w).

Other inventory information

US. Toxic Substances Control Act
On TSCA Inventory

Australia. Inventory of Industrial Chemicals (AIIC), as amended

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On the inventory, or in compliance with the inventory

Canada. Canadian Environmental Protection Act (CEPA). Domestic Substances List (DSL)
All components of this product are on the Canadian DSL

Japan. Kashin-Hou Law List

On the inventory, or in compliance with the inventory

Korea. Existing Chemicals Inventory (KECI)

On the inventory, or in compliance with the inventory

Philippines. Inventory of Chemicals and Chemical Substances (PICCS)

On the inventory, or in compliance with the inventory

China. Inventory of Existing Chemical Substances (IECSC)

On the inventory, or in compliance with the inventory

New Zealand. Inventory of Chemicals (NZIoC), as published by ERMA New Zealand

On the inventory, or in compliance with the inventory

Taiwan Chemical Substance Inventory (TCSI)

On the inventory, or in compliance with the inventory

15.2 Chemical safety assessment

A Chemical Safety Assessment has not been carried out.

SECTION 16: Other information

Text of H-statements referred to under heading 3

sodium hypochlorite, solution	:	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.
		EUH031	Contact with acids liberates toxic gas.

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Further information

All directives and regulations refer to amended versions.

Vertical lines in the left hand margin indicate a relevant amendment from the previous version.

Abbreviations:

EC European Community

CAS Chemical Abstracts Service

DNEL Derived no effect level

PNEC Predicted no effect level

vPvB Very persistent and very bioaccumulative substance

PBT Persistent, bioaccumulative und toxic substance

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text. Final determination of suitability of any material is the sole responsibility of the user.

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