

## Sodium hypochlorite solution

239305-500ML

Version 2.2

Revision Date 17.12.2022

Supersedes 1

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

#### 1.1. Product identifier

Product name : Sodium hypochlorite solution  
SDS-number : 000000020165  
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)  
Country based Poison Control Center : see chapter 15.1

### SECTION 2: Hazards identification

#### 2.1. Classification of the substance or mixture

**REGULATION (EC) No 1272/2008**

## Sodium hypochlorite solution

239305-500ML

Version 2.2


Revision Date 17.12.2022

Supersedes 1

Serious eye damage Category 1  
H318 Causes serious eye damage.  
Skin irritation Category 2  
H315 Causes skin irritation.  
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	:	H318 Causes serious eye damage. H315 Causes skin irritation. H410 Very toxic to aquatic life with long lasting effects.
Precautionary statements	:	P273 Avoid release to the environment. P280 Wear protective gloves/ eye protection/ face protection. P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P302 + P352 IF ON SKIN: Wash with plenty of soap and water. P308 + P313 IF exposed or concerned: Get medical advice/ attention.
Hazardous components which must be listed on the label	:	sodium hypochlorite, solution

### 2.3. Other hazards

## Sodium hypochlorite solution

239305-500ML

Version 2.2

Revision Date 17.12.2022

Supersedes 1

Contact with acids liberates toxic gas. Results of PBT and vPvB assessment, see chapter 12.5.

### SECTION 3: Composition/information on ingredients

#### 3.1. Substance

Not applicable

#### 3.2. Mixture

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 %	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:*

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

*Inhalation:*

Move 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.

## Sodium hypochlorite solution

239305-500ML

Version 2.2

Revision Date 17.12.2022

Supersedes 1

### *Eye contact:*

Protect unharmed eye. If easy to do, remove contact lens, if worn. 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**

No data available

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  
Carbon dioxide (CO<sub>2</sub>)  
Dry powder  
Foam

#### *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  
Sodium oxides

## Sodium hypochlorite solution

239305-500ML

Version 2.2

Revision Date 17.12.2022

Supersedes 1

### 5.3. Advice for firefighters

Wear self-contained breathing apparatus and protective suit.  
In the event of fire and/or explosion do not breathe fumes.  
No unprotected exposed skin areas.  
Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

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## SECTION 6: Accidental release measures

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

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

### 6.2. Environmental precautions

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

### 6.3. Methods and materials for containment and cleaning up

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.

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## 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.

## Sodium hypochlorite solution

239305-500ML

Version 2.2

Revision Date 17.12.2022

Supersedes 1

### 7.2. Conditions for safe storage, including any incompatibilities

*Requirements for storage areas and containers:*

Store in original container. Keep container tightly closed in a dry and 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 near acids.

### 7.3. Specific end use(s)

no additional data available

## 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/m <sup>3</sup>	Inhalation	
sodium hypochlorite, solution	Workers / Acute systemic effects		3,1 mg/m <sup>3</sup>	Inhalation	
sodium hypochlorite, solution	Workers / Long-term local effects		1,55 mg/m <sup>3</sup>	Inhalation	
sodium hypochlorite, solution	Workers / Acute local effects		3,1 mg/m <sup>3</sup>	Inhalation	
sodium hypochlorite, solution	Consumers / Long-term		1,55 mg/m <sup>3</sup>	Inhalation	

**Sodium hypochlorite solution**

239305-500ML

Version 2.2

Revision Date 17.12.2022

Supersedes 1

	systemic effects				
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	
sodium hypochlorite, solution	Consumers / Long-term systemic effects		0,26mg/kg bw/d	Ingestion	

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.

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.

## Sodium hypochlorite solution

239305-500ML

Version 2.2

Revision Date 17.12.2022

Supersedes 1

### *Hand protection:*

Glove material: Natural Latex

Break through time: > 480 min

Glove thickness: 0,6 mm

Lapren®706

Gloves must be inspected prior to use.

Replace when worn.

Remarks: Suitable gloves tested according EN 374 are supplied e.g. from KCL GmbH, D-36124

Eichenzell, Vertrieb@kcl.de

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 .

### *Eye protection:*

Safety goggles

### *Skin and body protection:*

Complete suit protecting against chemicals

## **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**

Physical state	:	liquid
Colour	:	yellow to green
Odour	:	stinging chlorine-like



## Sodium hypochlorite solution

239305-500ML

Version 2.2

Revision Date 17.12.2022

Supersedes 1

Melting point/range	:	-30 - -20 °C
Boiling point/boiling range	:	Decomposes on heating.
Flash point	:	Not applicable
Decomposition temperature	:	40 °C Decomposes on heating.
pH	:	> 11 Concentration: 12 g/l at 20 °C
Water solubility	:	soluble
Vapour pressure	:	ca. 25 hPa at 20 °C
Density	:	1,21 - 1,26 g/cm <sup>3</sup> at 20 °C
Relative vapour density	:	2,5

### 9.2 Other Information

no additional data available

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## SECTION 10: Stability and reactivity

### 10.1. Reactivity

Slow decomposition possible.

### 10.2. Chemical stability

ca.40 °C  
Decomposes on heating.

### 10.3. Possibility of hazardous reactions

## Sodium hypochlorite solution

239305-500ML

Version 2.2

Revision Date 17.12.2022

Supersedes 1

Hazardous polymerisation does not occur.

### 10.4. Conditions to avoid

Keep away from heat.  
Keep away from direct sunlight.  
Exposure to light.

### 10.5. Incompatible materials

Acids

### 10.6. Hazardous decomposition products

Fire may cause evolution of:  
Chlorine compounds  
Sodium oxides

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## SECTION 11: Toxicological information

### 11.1. Information on toxicological effects

*Acute oral toxicity:*  
No data available

*Acute dermal toxicity:*  
No data available

*Acute inhalation toxicity:*  
No data available

*Skin irritation:*  
Species: Rabbit  
Result: Mild skin irritation  
Method: OECD Test Guideline 404  
Classification based on Annex VI of regulation 1272/2008/EC.

*Eye irritation:*  
Classification based on Annex VI of regulation 1272/2008/EC.

*Respiratory or skin sensitisation:*  
Buehler Test  
Species: Guinea pig  
Classification: non-sensitizing

# SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006

**Honeywell**

## Sodium hypochlorite solution

239305-500ML

Version 2.2

Revision Date 17.12.2022

Supersedes 1

Method: OECD Test Guideline 406

*Carcinogenicity:*

Note: Animal testing did not show any carcinogenic effects.

*Germ cell mutagenicity:*

Test Method: reverse mutation assay

Cell type: Salmonella typhimurium

Metabolic activation: without metabolic activation

Result: negative

*Reproductive toxicity:*

Note: No toxicity to reproduction

*Aspiration hazard:*

No data available

### 11.2. Information on other hazards

Endocrine disrupting properties

No data available

*Other information:*

No data available

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## SECTION 12: Ecological information

### 12.1. Toxicity

*Toxicity to fish:*

LC50

flow-through test

Species: Oncorhynchus kisutch (coho salmon)

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

## Sodium hypochlorite solution

239305-500ML

Version 2.2

Revision Date 17.12.2022

Supersedes 1

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

Not applicable

### 12.4. Mobility in soil

No data available

### 12.5. Results of PBT and vPvB assessment

This mixture contains no substance considered to be persistent, bioaccumulating and toxic (PBT).

This mixture contains no substance considered to be very persistent and very bioaccumulating (vPvB).

## Sodium hypochlorite solution

239305-500ML

Version 2.2

Revision Date 17.12.2022

Supersedes 1

### 12.6. Endocrine disrupting properties

No data available

### 12.7. Other adverse effects

No data available

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## 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.

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## SECTION 14: Transport information

### 14.1 UN number

ADR/RID:3082

IMDG:3082

IATA:3082

### 14.2 UN proper shipping name

ADR/RID:ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.(SODIUM HYPOCHLORITE)

IMDG:ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.(SODIUM HYPOCHLORITE)

IATA:Environmentally hazardous substance, liquid, n.o.s.(Sodium hypochlorite)

### 14.3 Transport hazard class(es)

ADR/RID: 9

IMDG: 9

IATA: 9

### 14.4 Packaging group

ADR/RID: III

IMDG: III

IATA: III

**Sodium hypochlorite solution**

239305-500ML

Version 2.2

Revision Date 17.12.2022

Supersedes 1

**14.5 Environmental hazards**

ADR/RID: yes

Marine pollutant: yes

**14.6 Special precautions for user**

Not regulated for transport when single and combination packagings are <5L for liquids or <5kg for solids per ADR 2.2.9.2.10, IMDG 2.10.3 and IATA SP A197).

**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 Listed in Regulation : E1: Hazardous to the aquatic environment	<b>Quantity:</b> 100.000 kg <b>Quantity:</b> 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).

**Poison Control Center**

Country	Phone Number
Austria	+4314064343
Belgium	070 245245
Bulgaria	(+)35929154233
Croatia	(+3851)23-48-342
Cyprus	+357 2240 5611

Country	Phone Number
Liechtenstein	+41 442515151
Lithuania	+370532362052
Luxembourg	070245245; (+352)80002-5500
Malta	+356 2395 2000
Netherlands	030-2748888

**Sodium hypochlorite solution**

239305-500ML

Version 2.2

Revision Date 17.12.2022

Supersedes 1

Czech Republic	+420224919293; +420224915402
Denmark	82121212
Estonia	16662; (+372)6269390
Finland	9471977
France	+33(0)145425959
Greece	+30 210 779 3777
Hungary	(+36-80)201-199
Iceland	5432222
Ireland	+353(1)8092166
Italy	0382 24444
Germany	Berlin : 030/19240
	Bonn : 0228/19240
	Erfurt : 0361/730730
	Freiburg : 0761/19240
	Göttingen : 0551/19240
	Homburg : 06841/19240
	Mainz : 06131/19240
Munich : 089/19240	
Latvia	+37167042473

Norway	22591300
Poland	+48 42 25 38 400
Portugal	800250250
Romania	+40 21 318 3606
Slovakia (NTIC)	+421 2 54 774 166
Slovenia	+386 1 400 6051
Spain	+34915620420
Sweden	112 (begär Giftinformation);+46104566786
Switzerland	145
United Kingdom	(+44) 844 892 0111

**Other inventory information**

US. Toxic Substances Control Act  
On TSCA Inventory

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

## Sodium hypochlorite solution

239305-500ML

Version 2.2

Revision Date 17.12.2022

Supersedes 1

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.

### 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



# SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006

**Honeywell**

## Sodium hypochlorite solution

239305-500ML

Version 2.2

Revision Date 17.12.2022

Supersedes 1

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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.

This information should not constitute a guarantee for any specific product properties.

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