

sodium hypochlorite

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

1.1. Product identifier

Product name : sodium hypochlorite
 Registration number REACH : Not applicable (mixture)
 Product type REACH : Mixture

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

1.2.1 Relevant identified uses

Disinfectant

1.2.2 Uses advised against

No uses advised against known

1.3. Details of the supplier of the safety data sheet

Supplier of the safety data sheet

Loda NV
 Biezenstraat 21
 2340 Beerse
 ☎ +32 14 60 00 40
 📠 +32 14 61 82 05
 info@loda.be
www.loda.be

1.4. Emergency telephone number

24h/24h :

België/Belgique - Antigifcentrum/Centre Antipoisons: +32 70 245 245
 Nederland - Nationaal Vergiftigingen Informatie Centrum (NVIC): +31 88 755 8000
 (Uitsluitend bestemd om artsen te informeren bij accidentele vergiftigingen)
 (Only for the purpose of informing medical personnel in cases of acute intoxications)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classified as dangerous according to the criteria of Regulation (EC) No 1272/2008

Class	Category	Hazard statements
Met. Corr.	category 1	H290: May be corrosive to metals.
Skin Corr.	category 1B	H314: Causes severe skin burns and eye damage.
Eye Dam.	category 1	H318: Causes serious eye damage.
Aquatic Acute	category 1	H400: Very toxic to aquatic life.
Aquatic Chronic	category 2	H411: Toxic to aquatic life with long lasting effects.

2.2. Label elements



Signal word

Danger

H-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.

P-statements

P101 If medical advice is needed, have product container or label at hand.
 P102 Keep out of reach of children.
 P280 Wear protective gloves, protective clothing and eye protection/face protection.
 P260 Do not breathe vapours/mist.
 P264 Wash hands thoroughly after handling.
 P304 + P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.
 P301 + P330 + P331 IF SWALLOWED: rinse mouth. Do NOT induce vomiting.
 P405 Store locked up.
 P501 Dispose of contents/container in accordance with local/regional/national/international regulation.

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Supplemental information

EUH031

Contact with acids liberates toxic gas.

EUH206

Warning! Do not use together with other products. May release dangerous gases (chlorine).

2.3. Other hazards

No other hazards known

SECTION 3: Composition/information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Name REACH Registration No	CAS No EC No	Conc. (C)	Classification according to CLP	Note	Remark	M-factors and ATE
sodium hypochlorite 01-2119488154-34	7681-52-9 231-668-3	C≤20%	Met. Corr. 1; H290 Skin Corr. 1B; H314 Eye Dam. 1; H318 STOT SE 3; H335 Aquatic Acute 1; H400 Aquatic Chronic 1; H410 EUH031 EUH031: C≥5%, (CLP Annex VI (ATP 13))	(1)(2)(6)(10)	Constituent	M: 10 (Acute, CLP Annex VI (ATP 13)) M: 1 (Chronic, CLP Annex VI (ATP 13))

(1) For H- and EUH-statements in full: see section 16

(2) Substance with a Community workplace exposure limit

(6) Enumerated in Annex VI of Regulation (EC) No. 1272/2008 but the classification has been adapted after evaluation of available test data

(10) Subject to restrictions of Annex XVII of Regulation (EC) No. 1907/2006

SECTION 4: First aid measures

4.1. Description of first aid measures

General:

Observe (own) safety. If possible, approach victim and check vital functions. In case of injury and/or intoxication, call the European emergency number 112. Treat symptoms starting with most life-threatening injuries and disorders. Keep victim under observation, possibility of delayed symptoms.

After inhalation:

Remove victim into fresh air. Immediately consult a doctor/medical service.

After skin contact:

If possible, wipe up/dry remove chemical. Then rinse/shower immediately for 30 minutes with (lukewarm) water. Cut clothing; never remove burnt clothing from the wound. Do not give any pain medication. Consult a doctor/medical service.

After eye contact:

Rinse immediately with plenty of water for 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Consult a doctor/medical service.

After ingestion:

Rinse mouth with water. Immediately consult a doctor/medical service. Do not wait for symptoms to occur to consult Poison Center.

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

4.2.1 Acute symptoms

After inhalation:

EXPOSURE TO HIGH CONCENTRATIONS: Corrosion of the upper respiratory tract. Dry/sore throat. Coughing. Respiratory difficulties. Possible laryngeal spasm/oedema. Risk of lung oedema.

After skin contact:

Caustic burns/corrosion of the skin.

After eye contact:

Corrosion of the eye tissue. Permanent eye damage.

After ingestion:

Vomiting. Nausea. Burns to the gastric/intestinal mucosa. Possible esophageal perforation. Bleeding of the gastrointestinal tract. Shock. Disturbances of consciousness. FOLLOWING SYMPTOMS MAY APPEAR LATER: Tumours of the gastrointestinal tract.

4.2.2 Delayed symptoms

No effects known.

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

If applicable and available it will be listed below.

SECTION 5: Firefighting measures

5.1. Extinguishing media

5.1.1 Suitable extinguishing media:

Adapt extinguishing media to the environment for surrounding fires.

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5.1.2 Unsuitable extinguishing media:

Not applicable.

5.2. Special hazards arising from the substance or mixture

On burning: release of toxic and corrosive gases/vapours (chlorine, hydrogen chloride).

5.3. Advice for firefighters

5.3.1 Instructions:

Cool tanks/drums with water spray/remove them into safety. Do not move the load if exposed to heat. Dilute toxic gases with water spray. Take account of toxic/corrosive precipitation water. Take account of toxic fire-fighting water. Use water moderately and if possible collect or contain it.

5.3.2 Special protective equipment for fire-fighters:

Gas-tight suit (EN 943). Corrosion-proof suit (EN 14605). Self-contained breathing apparatus (EN 136 + EN 137).

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Keep upwind. Seal off low-lying areas. Close doors and windows of adjacent premises. No naked flames. Corrosion-proof appliances. Keep containers closed.

6.1.1 Protective equipment for non-emergency personnel

See section 8.2

6.1.2 Protective equipment for emergency responders

Gas-tight suit (EN 943). Corrosion-proof suit (EN 14605).

Suitable protective clothing

See section 8.2

6.2. Environmental precautions

Contain released product, collect/pump into suitable containers. Plug the leak, cut off the supply. Dam up the liquid spill. Try to reduce evaporation. Take account of toxic/corrosive precipitation water. Prevent soil and water pollution. Prevent spreading in sewers.

6.3. Methods and material for containment and cleaning up

Take up liquid spill into absorbent material, e.g.: sand, earth, vermiculite. Scoop absorbed substance into closing containers. Carefully collect the spill/leftovers. Damaged/cooled tanks must be emptied. Clean contaminated surfaces with an excess of water. Take collected spill to manufacturer/competent authority. Wash clothing and equipment after handling.

6.4. Reference to other sections

See section 13.

SECTION 7: Handling and storage

The information in this section is a general description. If applicable and available, exposure scenarios are attached in annex. Always use the relevant exposure scenarios that correspond to your identified use.

7.1. Precautions for safe handling

Keep away from naked flames/heat. Gas/vapour heavier than air at 20°C. Observe strict hygiene. Remove contaminated clothing immediately. Do not discharge the waste into the drain. Keep container tightly closed.

7.2. Conditions for safe storage, including any incompatibilities

7.2.1 Safe storage requirements:

Store in a cool area. Store in a dark area. Keep container in a well-ventilated place. Keep locked up. Unauthorized persons are not admitted. Provide for a tub to collect spills. Keep only in the original container. Limited time of storage. Keep out of direct sunlight. Meet the legal requirements.

7.2.2 Keep away from:

Heat sources, combustible materials, reducing agents, (strong) acids, metals, organic materials.

7.2.3 Suitable packaging material:

Steel, synthetic material, polyethylene, glass, stoneware/porcelain.

7.2.4 Non suitable packaging material:

Iron, copper, tin, nickel.

7.3. Specific end use(s)

If applicable and available, exposure scenarios are attached in annex. See information supplied by the manufacturer.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

8.1.1 Occupational exposure

a) Occupational exposure limit values

If limit values are applicable and available these will be listed below.

EU

Chlorine	Short time value (Indicative occupational exposure limit value)	0.5 ppm
	Short time value (Indicative occupational exposure limit value)	1.5 mg/m ³

Belgium

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Chlore	Short time value	0.5 ppm
	Short time value	1.5 mg/m ³

The Netherlands

Chloor	Short time value (Public occupational exposure limit value)	0.5 ppm
	Short time value (Public occupational exposure limit value)	1.5 mg/m ³

France

Chlore	Short time value (VRC: Valeur réglementaire contraignante)	0.5 ppm
	Short time value (VRC: Valeur réglementaire contraignante)	1.5 mg/m ³

Germany

Chlor	Time-weighted average exposure limit 8 h (TRGS 900)	0.5 ppm
	Time-weighted average exposure limit 8 h (TRGS 900)	1.5 mg/m ³

UK

Chlorine	Short time value (Workplace exposure limit (EH40/2005))	0.5 ppm
	Short time value (Workplace exposure limit (EH40/2005))	1.5 mg/m ³

USA (TLV-ACGIH)

Chlorine	Time-weighted average exposure limit 8 h (TLV - Adopted Value)	0.1 ppm
	Short time value (TLV - Adopted Value)	0.4 ppm

b) National biological limit values

If limit values are applicable and available these will be listed below.

8.1.2 Sampling methods

Product name	Test	Number
Chlorine	NIOSH	6011
Chlorine	OSHA	ID 101
Chlorine	OSHA	ID 126SGX

8.1.3 Applicable limit values when using the substance or mixture as intended

If limit values are applicable and available these will be listed below.

8.1.4 Threshold values

DNEL/DMEL - Workers

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Effect level (DNEL/DMEL)	Type	Value	Remark
DNEL	Long-term systemic effects inhalation	1.55 mg/m ³	
	Acute systemic effects inhalation	3.1 mg/m ³	
	Long-term local effects inhalation	1.55 mg/m ³	
	Acute local effects inhalation	3.1 mg/m ³	
	Long-term local effects dermal	0.5 %	

DNEL/DMEL - General population

sodium hypochlorite

Effect level (DNEL/DMEL)	Type	Value	Remark
DNEL	Long-term systemic effects inhalation	1.55 mg/m ³	
	Acute systemic effects inhalation	3.1 mg/m ³	
	Long-term local effects inhalation	1.55 mg/m ³	
	Acute local effects inhalation	3.1 mg/m ³	
	Long-term local effects dermal	0.5 %	
	Long-term systemic effects oral	0.26 mg/kg bw/day	

PNEC

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Compartments	Value	Remark
Fresh water	0.21 µg/l	
Marine water	0.042 µg/l	
STP	4.69 mg/l	
Oral	11.1 mg/kg food	
Fresh water (intermittent releases)	0.26 µg/l	

8.1.5 Control banding

If applicable and available it will be listed below.

8.2. Exposure controls

The information in this section is a general description. If applicable and available, exposure scenarios are attached in annex. Always use the relevant exposure scenarios that correspond to your identified use.

8.2.1 Appropriate engineering controls

Keep away from naked flames/heat. Measure the concentration in the air regularly. Carry operations in the open/under local exhaust/ventilation or with respiratory protection.

8.2.2 Individual protection measures, such as personal protective equipment

Observe strict hygiene. Do not eat, drink or smoke during work.

a) Respiratory protection:

Full face mask with filter type B. High vapour/gas concentration: self-contained breathing apparatus (EN 136 + EN 137).

b) Hand protection:

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Protective gloves against chemicals (EN 374).

Materials	Remark
butyl rubber	Good resistance
natural rubber	Good resistance
neoprene	Good resistance
polyethylene	Good resistance
viton	Good resistance
PVC	Good resistance
nitrile rubber	Good resistance

c) Eye protection:

Combined eye and respiratory protection.

d) Skin protection:

Head/neck protection. Corrosion-proof clothing (EN 14605).

8.2.3 Environmental exposure controls:

See sections 6.2, 6.3 and 13

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical form	Liquid
Odour	Irritating/pungent odour Characteristic odour
Odour threshold	No data available in the literature
Colour	Yellow
Translucency	Clear
Particle size	Not applicable (liquid)
Explosion limits	Not applicable
Flammability	Not classified as flammable
Log Kow	Not applicable (mixture)
Dynamic viscosity	1 mPa.s ; 20 °C
Kinematic viscosity	1 mm ² /s ; 40 °C
Melting point	-16 °C
Boiling point	100 °C
Relative vapour density	No data available in the literature
Vapour pressure	23 hPa ; 20 °C
Solubility	Water ; complete
Relative density	1.22 ; 20 °C
Absolute density	1220 kg/m ³ ; 20 °C
Decomposition temperature	No data available in the literature
Auto-ignition temperature	Not applicable
Flash point	Not applicable
pH	No data available in the literature

9.2. Other information

No data available

SECTION 10: Stability and reactivity

10.1. Reactivity

Basic reaction. May be corrosive to metals.

10.2. Chemical stability

No data available.

10.3. Possibility of hazardous reactions

Decomposes slowly on exposure to air: oxidation resulting in increased fire or explosion risk and release of toxic and corrosive gases/vapours (chlorine). This reaction is accelerated on exposure to light, on exposure to temperature rise and on exposure to (some) metals. Reacts with organic material. Reacts with (strong) reducers: (increased) risk of fire/explosion.

10.4. Conditions to avoid

Precautionary measures

Keep away from naked flames/heat.

10.5. Incompatible materials

Combustible materials, reducing agents, (strong) acids, metals, organic materials.

10.6. Hazardous decomposition products

Reacts violently with (some) acids: release of toxic and corrosive gases/vapours (chlorine). On burning: release of toxic and corrosive gases/vapours (chlorine, hydrogen chloride).

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SECTION 11: Toxicological information

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

11.1.1 Test results

Acute toxicity

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No (test)data on the mixture available

Classification is based on the relevant ingredients

sodium hypochlorite

Route of exposure	Parameter	Method	Value	Exposure time	Species	Value determination	Remark
Oral	LC50	Equivalent to OECD 401	8910 mg/kg bw		Rat (male)	Experimental value	
Dermal	LD50	Equivalent to OECD 402	> 20000 mg/kg bw		Rabbit (male / female)	Experimental value	
Inhalation (vapours)	LC50	Equivalent to OECD 403	> 10.5 mg/l	1 h	Rat (male)	Experimental value	

Conclusion

Not classified for acute toxicity

Corrosion/irritation

sodium hypochlorite

No (test)data on the mixture available

Classification is based on the relevant ingredients

sodium hypochlorite

Route of exposure	Result	Method	Exposure time	Time point	Species	Value determination	Remark
Eye	Irritating	OECD 405		24; 48; 72 hours	Rabbit	Experimental value	5% aqueous solution
Eye	Serious eye damage; category 1					Annex VI	
Skin	Slightly irritating	OECD 404	4 h	4; 24; 48; 72 hours	Rabbit	Experimental value	5% aqueous solution
Skin	Corrosive; category 1B					Annex VI	
Inhalation	Irritating; STOT SE cat.3					Annex VI	

Conclusion

Causes severe skin burns and eye damage.

Not classified as irritating to the respiratory system

Respiratory or skin sensitisation

sodium hypochlorite

No (test)data on the mixture available

Classification is based on the relevant ingredients

sodium hypochlorite

Route of exposure	Result	Method	Exposure time	Observation time point	Species	Value determination	Remark
Skin	Not sensitizing	Equivalent to OECD 406			Guinea pig (male / female)	Experimental value	

Conclusion

Not classified as sensitizing for skin

Not classified as sensitizing for inhalation

Specific target organ toxicity

sodium hypochlorite

No (test)data on the mixture available

Classification is based on the relevant ingredients

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sodium hypochlorite

Route of exposure	Parameter	Method	Value	Organ	Effect	Exposure time	Species	Value determination
Oral (drinking water)	NOAEL	OECD 408	≥ 16.7 mg/kg bw/day		No effect	90 day(s)	Rat (male)	Experimental value
Oral (drinking water)	NOAEL	OECD 408	≥ 24.9 mg/kg bw/day		No effect	90 day(s)	Rat (female)	Experimental value
Dermal								Data waiving
Inhalation	LOAEL	Equivalent to OECD 412	≤ 3 mg/m ³ air		General effects	6 weeks (6h / day, 5 days / week)	Rat (male / female)	Read-across

Conclusion

Not classified for subchronic toxicity

Mutagenicity (in vitro)

sodium hypochlorite

No (test)data on the mixture available

Classification is based on the relevant ingredients

sodium hypochlorite

Result	Method	Test substrate	Effect	Value determination	Remark
Negative without metabolic activation	Equivalent to OECD 471	Bacteria (S.typhimurium)		Experimental value	
Ambiguous	Equivalent to OECD 473	CHL/IU cells		Experimental value	

Mutagenicity (in vivo)

sodium hypochlorite

No (test)data on the mixture available

Classification is based on the relevant ingredients

sodium hypochlorite

Result	Method	Exposure time	Test substrate	Organ	Value determination
Negative (Intraperitoneal)	Equivalent to OECD 474	4 dose(s)/24-hour interval	Mouse (male)		Experimental value

Conclusion

Not classified for mutagenic or genotoxic toxicity

Carcinogenicity

sodium hypochlorite

No (test)data on the mixture available

Classification is based on the relevant ingredients

sodium hypochlorite

Route of exposure	Parameter	Method	Value	Exposure time	Species	Effect	Organ	Value determination
Oral (drinking water)	NOAEL	Equivalent to OECD 453	50 mg/kg bw/day - 57.2 mg/kg bw/day	104 week(s)	Rat (male / female)	No carcinogenic effect		Experimental value

Conclusion

Not classified for carcinogenicity

Reproductive toxicity

sodium hypochlorite

No (test)data on the mixture available

Classification is based on the relevant ingredients

sodium hypochlorite

	Parameter	Method	Value	Exposure time	Species	Effect	Organ	Value determination
Developmental toxicity (Oral (drinking water))	NOAEL	Equivalent to OECD 414	≥ 5.7 mg/kg bw/day	2.5 month(s)	Rat (female)	No effect		Experimental value
Effects on fertility (Oral (stomach tube))	NOAEL	Equivalent to OECD 415	≥ 5 mg/kg bw/day		Rat (male / female)	No effect		Experimental value

Conclusion

Not classified for reprotoxic or developmental toxicity

Toxicity other effects

sodium hypochlorite

No (test)data on the mixture available

Classification is based on the relevant ingredients

Chronic effects from short and long-term exposure

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sodium hypochlorite

No effects known.

11.2. Information on other hazards

No evidence of endocrine disrupting properties

SECTION 12: Ecological information

12.1. Toxicity

sodium hypochlorite

No (test)data on the mixture available

Classification is based on the relevant ingredients

sodium hypochlorite

	Parameter	Method	Value	Duration	Species	Test design	Fresh/salt water	Value determination
Acute toxicity fishes	LC50		0.032 mg/l	96 h	Salmo sp.	Flow-through system	Salt water	Experimental value; Nominal concentration
Acute toxicity crustacea	EC50	OECD 202	35 µg/l	48 h	Ceriodaphnia dubia	Flow-through system	Fresh water	Experimental value; Locomotor effect
Toxicity algae and other aquatic plants	NOEC	OECD 201	0.0054 mg/l	72 h	Pseudokirchneriella subcapitata	Static system	Fresh water	Experimental value; GLP
	ErC50	OECD 201	0.036 mg/l	72 h	Pseudokirchneriella subcapitata	Static system	Fresh water	Experimental value; GLP
Long-term toxicity fish	NOEC		0.04 mg/l	28 day(s)	Menidia peninsulae	Flow-through system	Salt water	Experimental value; Nominal concentration
Long-term toxicity aquatic crustacea	NOEC		7 µg/l	15 day(s)	Crassostrea virginica	Flow-through system	Fresh water	Experimental value; Estimated value

Conclusion

Very toxic to aquatic life.

Toxic to aquatic life with long lasting effects.

12.2. Persistence and degradability

Water

Biodegradability: not applicable

12.3. Bioaccumulative potential

sodium hypochlorite

Log Kow

Method	Remark	Value	Temperature	Value determination
	Not applicable (mixture)			

sodium hypochlorite

Log Kow

Method	Remark	Value	Temperature	Value determination
	Not applicable (mixture)			

Conclusion

Does not contain bioaccumulative component(s)

12.4. Mobility in soil

Contains component(s) with potential for mobility in the soil

12.5. Results of PBT and vPvB assessment

The criteria of PBT and vPvB as listed in Annex XIII of Regulation (EC) No 1907/2006 do not apply to inorganic substances.

12.6. Endocrine disrupting properties

No evidence of endocrine disrupting properties

12.7. Other adverse effects

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Greenhouse gases

None of the known components is included in the list of fluorinated greenhouse gases (Regulation (EU) No 517/2014)

Ozone-depleting potential (ODP)

Not classified as dangerous for the ozone layer (Regulation (EC) No 1005/2009)

Water ecotoxicity pH

pH shift

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SECTION 13: Disposal considerations

The information in this section is a general description. If applicable and available, exposure scenarios are attached in annex. Always use the relevant exposure scenarios that correspond to your identified use.

13.1. Waste treatment methods

13.1.1 Provisions relating to waste

European Union

Hazardous waste according to Directive 2008/98/EC, as amended by Regulation (EU) No 1357/2014 and Regulation (EU) No 2017/997. The waste code must be assigned by the user, preferably in consultation with the (environmental) authorities concerned.

13.1.2 Disposal methods

Remove waste in accordance with local and/or national regulations. Hazardous waste shall not be mixed together with other waste. Different types of hazardous waste shall not be mixed together if this may entail a risk of pollution or create problems for the further management of the waste. Hazardous waste shall be managed responsibly. All entities that store, transport or handle hazardous waste shall take the necessary measures to prevent risks of pollution or damage to people or animals. Do not discharge into drains or the environment. Dispose of at authorized waste collection point.

13.1.3 Packaging/Container

European Union

Waste material code packaging (Directive 2008/98/EC).

15 01 10* (packaging containing residues of or contaminated by dangerous substances).

SECTION 14: Transport information

Road (ADR)

14.1. UN number

UN number	1791
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14.2. UN proper shipping name

Proper shipping name	hypochlorite solution
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14.3. Transport hazard class(es)

Hazard identification number	80
Class	8
Classification code	C9

14.4. Packing group

Packing group	III
Labels	8

14.5. Environmental hazards

Environmentally hazardous substance mark	yes
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14.6. Special precautions for user

Special provisions	521
Limited quantities	Combination packagings: not more than 5 liters per inner packaging for liquids. A package shall not weigh more than 30 kg. (gross mass)

Rail (RID)

14.1. UN number

UN number	1791
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14.2. UN proper shipping name

Proper shipping name	hypochlorite solution
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14.3. Transport hazard class(es)

Hazard identification number	80
Class	8
Classification code	C9

14.4. Packing group

Packing group	III
Labels	8

14.5. Environmental hazards

Environmentally hazardous substance mark	yes
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14.6. Special precautions for user

Special provisions	521
Limited quantities	Combination packagings: not more than 5 liters per inner packaging for liquids. A package shall not weigh more than 30 kg. (gross mass)

Inland waterways (ADN)

14.1. UN number

UN number	1791
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14.2. UN proper shipping name

Proper shipping name	hypochlorite solution
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14.3. Transport hazard class(es)

Class	8
Classification code	C9

14.4. Packing group

Packing group	III
Labels	8

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14.5. Environmental hazards

Environmentally hazardous substance mark	yes
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14.6. Special precautions for user

Special provisions	521
Limited quantities	Combination packagings: not more than 5 liters per inner packaging for liquids. A package shall not weigh more than 30 kg. (gross mass)

Sea (IMDG/IMSBC)

14.1. UN number

UN number	1791
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14.2. UN proper shipping name

Proper shipping name	hypochlorite solution
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14.3. Transport hazard class(es)

Class	8
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14.4. Packing group

Packing group	III
Labels	8

14.5. Environmental hazards

Marine pollutant	P
Environmentally hazardous substance mark	yes

14.6. Special precautions for user

Special provisions	223
Special provisions	274
Special provisions	900
Limited quantities	Combination packagings: not more than 5 liters per inner packaging for liquids. A package shall not weigh more than 30 kg. (gross mass)

14.7. Maritime transport in bulk according to IMO instruments

Annex II of MARPOL 73/78	Not applicable, based on available data
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Air (ICAO-TI/IATA-DGR)

14.1. UN number

UN number	1791
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14.2. UN proper shipping name

Proper shipping name	hypochlorite solution
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14.3. Transport hazard class(es)

Class	8
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14.4. Packing group

Packing group	III
Labels	8

14.5. Environmental hazards

Environmentally hazardous substance mark	yes
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14.6. Special precautions for user

Special provisions	A3
Special provisions	A803

Passenger and cargo transport

Limited quantities: maximum net quantity per packaging	1 L
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SECTION 15: Regulatory information

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

European legislation:

VOC content Directive 2010/75/EU

VOC content	Remark
	Not applicable (inorganic)

Plant protection products

Included in implementing Regulation (EU) No 540/2011, annex part A

Ingredients according to Regulation (EC) No 648/2004 and amendments

15-30% chlorine-based bleaching agents

European drinking water standards (98/83/EC and 2020/2184)

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Parameter	Parametric value	Note	Reference
Sodium	200 mg/l		Listed in Annex I, Part C, of Directive (EU) 2020/2184 on the quality of water intended for human consumption.
Chlorite	0.25 mg/l		Listed in Annex I, Part B, of Directive (EU) 2020/2184 on the quality of water intended for human consumption.

REACH Annex XVII - Restriction

Contains component(s) subject to restrictions of Annex XVII of Regulation (EC) No 1907/2006: restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles.

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sodium hypochlorite

	Designation of the substance, of the group of substances or of the mixture	Conditions of restriction
· sodium hypochlorite	Liquid substances or mixtures fulfilling the criteria for any of the following hazard classes or categories set out in Annex I to Regulation (EC) No 1272/2008: (a) hazard classes 2.1 to 2.4, 2.6 and 2.7, 2.8 types A and B, 2.9, 2.10, 2.12, 2.13 categories 1 and 2, 2.14 categories 1 and 2, 2.15 types A to F; (b) hazard classes 3.1 to 3.6, 3.7 adverse effects on sexual function and fertility or on development, 3.8 effects other than narcotic effects, 3.9 and 3.10; (c) hazard class 4.1; (d) hazard class 5.1.	1. Shall not be used in: — ornamental articles intended to produce light or colour effects by means of different phases, for example in ornamental lamps and ashtrays, — tricks and jokes, — games for one or more participants, or any article intended to be used as such, even with ornamental aspects, 2. Articles not complying with paragraph 1 shall not be placed on the market. 3. Shall not be placed on the market if they contain a colouring agent, unless required for fiscal reasons, or perfume, or both, if they: — can be used as fuel in decorative oil lamps for supply to the general public, and, — present an aspiration hazard and are labelled with H304, 4. Decorative oil lamps for supply to the general public shall not be placed on the market unless they conform to the European Standard on Decorative oil lamps (EN 14059) adopted by the European Committee for Standardisation (CEN). 5. Without prejudice to the implementation of other Community provisions relating to the classification, packaging and labelling of dangerous substances and mixtures, suppliers shall ensure, before the placing on the market, that the following requirements are met: a) lamp oils, labelled with H304, intended for supply to the general public are visibly, legibly and indelibly marked as follows: "Keep lamps filled with this liquid out of the reach of children"; and, by 1 December 2010, "Just a sip of lamp oil — or even sucking the wick of lamps — may lead to life-threatening lung damage"; b) grill lighter fluids, labelled with H304, intended for supply to the general public are legibly and indelibly marked by 1 December 2010 as follows: "Just a sip of grill lighter may lead to life threatening lung damage"; c) lamp oils and grill lighters, labelled with H304, intended for supply to the general public are packaged in black opaque containers not exceeding 1 litre by 1 December 2010.
· sodium hypochlorite	Substances falling within one or more of the following points: (a) substances classified as any of the following in Part 3 of Annex VI to Regulation (EC) No 1272/2008: — carcinogen category 1A, 1B or 2, or germ cell mutagen category 1A, 1B or 2, but excluding any such substances classified due to effects only following exposure by inhalation — reproductive toxicant category 1A, 1B or 2 but excluding any such substances classified due to effects only following exposure by inhalation — skin sensitiser category 1, 1A or 1B — skin corrosive category 1, 1A, 1B or 1C or skin irritant category 2 — serious eye damage category 1 or eye irritant category 2 (b) substances listed in Annex II to Regulation (EC) No 1223/2009 of the European Parliament and of the Council (c) substances listed in Annex IV to Regulation (EC) No 1223/2009 for which a condition is specified in at least one of the columns g, h and i of the table in that Annex (d) substances listed in Appendix 13 to this Annex. The ancillary requirements in paragraphs 7 and 8 of column 2 of this entry apply to all mixtures for use for tattooing purposes, whether or not they contain a substance falling within points (a) to (d) of this column of this entry.	Mixtures for tattooing purposes are subject to the restrictions of Regulation (EU) 2020/2081

National legislation Belgium

sodium hypochlorite

No data available

National legislation The Netherlands

sodium hypochlorite

Waterbezwaarlijkheid	A (1); Algemene Beoordelingsmethodiek (ABM)
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National legislation France

sodium hypochlorite

No data available

National legislation Germany

sodium hypochlorite

Lagerklasse (TRGS510)	8 B: Nicht brennbare ätzende Gefahrstoffe
WGK	2; Verordnung über Anlagen zum Umgang mit wassergefährdenden Stoffen (AwSV) - 18. April 2017
sodium hypochlorite	
TRGS900 - Risiko der Fruchtschädigung	Chlor; Y; Risiko der Fruchtschädigung braucht bei Einhaltung des Arbeitsplatzgrenzwertes und des biologischen Grenzwertes nicht befürchtet zu werden

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sodium hypochlorite

National legislation United Kingdom

sodium hypochlorite

No data available

Other relevant data

sodium hypochlorite

No data available

sodium hypochlorite

TLV - Carcinogen	Chlorine; A4
IARC - classification	3; Hypochlorite salts
	3; Hypochlorite salts

15.2. Chemical safety assessment

No chemical safety assessment has been conducted for the mixture.

SECTION 16: Other information

Full text of any H- and EUH-statements referred to under section 3:

H290 May be corrosive to metals.
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.
H411 Toxic to aquatic life with long lasting effects.
EUH206 Warning! Do not use together with other products. May release dangerous gases (chlorine).
EUH031 Contact with acids liberates toxic gas.

(*)	INTERNAL CLASSIFICATION BY BIG
ADI	Acceptable daily intake
AOEL	Acceptable operator exposure level
ATE	Acute Toxicity Estimate
CLP (EU-GHS)	Classification, labelling and packaging (Globally Harmonised System in Europe)
DMEL	Derived Minimal Effect Level
DNEL	Derived No Effect Level
EC50	Effect Concentration 50 %
ErC50	EC50 in terms of reduction of growth rate
LC50	Lethal Concentration 50 %
LD50	Lethal Dose 50 %
NOAEL	No Observed Adverse Effect Level
NOEC	No Observed Effect Concentration
OECD	Organisation for Economic Co-operation and Development
PBT	Persistent, Bioaccumulative & Toxic
PNEC	Predicted No Effect Concentration
STP	Sludge Treatment Process
vPvB	very Persistent & very Bioaccumulative

The information in this safety data sheet is based on data and samples provided to BIG. The sheet was written to the best of our ability and according to the state of knowledge at that time. The safety data sheet only constitutes a guideline for the safe handling, use, consumption, storage, transport and disposal of the substances/preparations/mixtures mentioned under point 1. New safety data sheets are written from time to time. Only the most recent versions may be used. Unless indicated otherwise word for word on the safety data sheet, the information does not apply to substances/preparations/mixtures in purer form, mixed with other substances or in processes. The safety data sheet offers no quality specification for the substances/preparations/mixtures in question. Compliance with the instructions in this safety data sheet does not release the user from the obligation to take all measures dictated by common sense, regulations and recommendations or which are necessary and/or useful based on the real applicable circumstances. BIG does not guarantee the accuracy or exhaustiveness of the information provided and cannot be held liable for any changes by third parties. This safety data sheet is only to be used within the European Union, Switzerland, Iceland, Norway and Liechtenstein. Any use outside of this area is at your own risk. Use of this safety data sheet is subject to the licence and liability limiting conditions as stated in your BIG licence agreement or when this is failing the general conditions of BIG. All intellectual property rights to this sheet are the property of BIG and its distribution and reproduction are limited. Consult the mentioned agreement/conditions for details.

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