

SODIUM HYPOCHLORITE

Code: HLH22

Safety Data Sheet compliant with Regulation (EU) 2020/878

Version 7.0.1

Creation date : 08/02/23

Revision: 02/03/23

Print Date : 09/12/23

SECTION 2: HAZARDS IDENTIFICATION

2.1. Classification of the substance or mixture

The mixture meets the classification criteria provided for under Regulation (EC) No 1272/2008.

Substance corrosive to metals - Category 1	EUH 031: Contact with acids liberates toxic gas.
Skin corrosion - Category 1B	H290: May be corrosive to metals.
Serious damage to eyes - Category 1	H314: Causes severe skin burns and eye damage.
Hazardous to the aquatic environment – Acute - Category 1	H318: Causes serious eye damage.
Hazardous to the aquatic environment – Chronic - Category 2	H400: Very toxic to aquatic life.
	H411: Toxic to aquatic life with long lasting effects.

2.2. Label elements

Labelling according to 1272/2008/EC Regulation:

Hazard pictograms(s) :



Signal word :
Danger

Contains : Sodium hydroxide+ Sodium hypochlorite

Hazard statement(s) :

H290: May be corrosive to metals.

H314: Causes severe skin burns and eye damage.

H410: Very toxic to aquatic life with long lasting effects.

EUH 031: Contact with acids liberates toxic gas.

Precautionary statement(s) :

P234: Keep only in original packaging.

P273: Avoid release to the environment.

P280: Wear protective gloves/protective clothing/eye protection.

P303 + P361 + P353: IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with

SODIUM HYPOCHLORITE

Code: HLH22

Safety Data Sheet compliant with Regulation (EU) 2020/878

Version 7.0.1

Creation date : 08/02/23

Revision: 02/03/23

Print Date : 09/12/23

water [or shower].

P305 + P351 + P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P313: Get medical advice/attention.

P501: Dispose of contents/container in accordance with local/regional/national/international regulations.

2.3. Other hazards

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.1. Substances

Not applicable as this involves a mixture.

3.2. Mixtures

Chemical nature of the mixture : CHLORINATED ALKALI LIQUID

Substance(s)	CAS number(s)	EINECS number(s)	index	No registration REACH	Classification according to Regulation (EC) 1272/2008	SCL M-factor ATE	Type
10% < Sodium hypochlorite < 20%	7681-52-9	231-668-3	017-011-00-1		Met. Corr. 1 H290 Skin Corr. 1B H314 STOT SE 3 H335 Aquatic Acute 1 H400 Aquatic Chronic 1 H410 EUH 031	C ≥ 5% EUH 031 M Factor (Acute) 10 M Factor (Chronic) 1	(1)
1% ≤ Sodium chlorate < 5%	7775-09-9	231-887-4	017-005-00-9		Ox. Sol. 1 H271 Acute Tox. 4 (oral) H302 Aquatic Chronic 2 H411		(1)
0.1% < Sodium hydroxide < 2%	1310-73-2	215-185-5	011-002-00-6		Skin Corr. 1A H314 Met. Corr. 1 H290	C ≥ 5% Skin Corr. 1A H314 2% ≤ C < 5% Skin Corr. 1B H314 0.5% ≤ C < 2% Skin Irrit. 2 H315 Eye Irrit. 2 H319	(1)
0.1% < Sodium carbonate < 4%	497-19-8	207-838-8			Eye Irrit. 2 H319		(1)

Type

(1) : Substance classified as hazardous for health and/or the environment

(2) : Substance with an exposure limit at the work station.

SODIUM HYPOCHLORITE

Code: HLH22

Safety Data Sheet compliant with Regulation (EU) 2020/878

Version **7.0.1**

Creation date : **08/02/23**

Revision: **02/03/23**

Print Date : 09/12/23

Substance of very high concern candidate for the authorisation procedure:

- (3) : Substance considered as PBT (persistent, bioaccumulable, toxic)
- (4) : Substance considered as vPvB (very persistent, very bioaccumulable)
- (5) : Substance considered as carcinogenic category 1A
- (6) : Substance considered as carcinogenic category 1B
- (7) : Substance considered as mutagenic category 1A
- (8) : Substance considered as mutagenic category 1B
- (9) : Substance considered as reprotoxic category 1A
- (10) : Substance considered as reprotoxic category 1B
- (11) : Substance considered as endocrine disrupter
- (12) : Other substance considered hazardous to health or the environment
- (N) : Nanomaterial

Full text of H- and EUH- phrases : see section 16.

SECTION 4: FIRST AID MEASURES

4.1. Description of first aid measures

General indications:

Take the contaminated clothes and shoes off immediately. Wash them before wearing them again.
In case of faintness , get medical advice/attention. Show this safety data sheet to the doctor.

In the event of inhalation :

Bring to fresh air.
Put into practice respiratory help procedure if needed and get medical advice immediately.

In the event of contact with the skin :

Immediately call a POISON CENTER or doctor/physician.
Take off immediately all contaminated clothing.
Wash immediately with plenty of water for 15 minutes at least.

In the event of contact with the eyes :

Rinse at once with a soft stream of water for at least 15 minutes, eyes wide open.
Remove contact lenses if present and easy to do. Continue rinsing.
Immediately call a POISON CENTER or doctor/physician.

In the event of ingestion :

Rinse mouth.
Do NOT induce vomiting.
Send to hospital.

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

Skin contact : Corrosive : Causes severe burns.

Eye contact : Causes serious eye damage.

Ingestion : Causes severe burns in mouth and digestive tract.
Risk of perforating digestive tracts.

Inhalation : May cause a respiratory system irritation.

SODIUM HYPOCHLORITE

Code: HLH22

Safety Data Sheet compliant with Regulation (EU) 2020/878

Version 7.0.1

Creation date : 08/02/23

Revision: 02/03/23

Print Date : 09/12/23

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

Treatments : Symptomatic treatment

SECTION 5: FIREFIGHTING MEASURES

5.1. Extinguishing media

Suitable extinguishing media :

Agents compatible with other products involved into fire.

Unsuitable extinguishing media :

None from our knowledge.

5.2. Special hazards arising from the substance or mixture

SODIUM HYPOCHLORITE is non-flammable.

However, in contact with certain metals (aluminium, zinc...), release of flammable and/or explosive hydrogen if ignited.

5.3. Advice for firefighters

Wear independent respiratory equipment and protective suit.

Collect contaminated firefighting water separately, must not be discharged into the drains.

Keep containers cool by spraying with water if exposed to fire.

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel :

Wear suitable protective clothing.

Respect protective measures presented at heading 8.

Evacuate non-essential staff and those not equipped with individual protection apparatus.

6.1.2. For emergency responders :

Evacuate the personnel to a safe location.

Keep people upwind and away from the location of the flow/leak.

Use personal protection equipment.

6.2. Environmental precautions

Do not discharge the product directly to sewer or to environment.

Informing the authorities if the product penetrates in the sewers or in the waters of the public domain.

6.3. Methods and material for containment and cleaning up

SODIUM HYPOCHLORITE

Code: HLH22

Safety Data Sheet compliant with Regulation (EU) 2020/878

Version 7.0.1

Creation date : 08/02/23

Revision: 02/03/23

Print Date : 09/12/23

Small spillage :

Absorb with such materials as: Sand. Vermiculite.

Large spillage :

Never return spills in original containers for re-use.

Keep in suitable, properly labelled and closed containers for disposal.

Mark out and contain using a, inert, non-combustible absorbent material, such as sand, earth, vermiculite or diatomaceous earth and recover in an emergency tank.

6.4. Reference to other sections

Respect protective measures presented at heading 8.

Refer to section 13 for the elimination.

SECTION 7: HANDLING AND STORAGE

7.1. Precautions for safe handling

Do not breathe vapour.

Avoid contact with skin, eyes and clothing.

Do not eat, drink or smoke in work area. Avoid projections during use.

Do not mix with an acid.

Take off immediately all contaminated clothing.

Operate in a well ventilated place.

7.2. Conditions for safe storage, including any incompatibilities

7.2.1. Storage :

Ideally store between 0 and 25°C.

Keep only in the original container.

Keep away from products sensitive to chlorinated alkalis.

Keep container closed.

Keep in a cool place.

7.2.2. Packaging or wrapping materials :

7.3. Specific end use(s)

SODIUM HYPOCHLORITE is for use as a biocide.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. Control parameters

Exposure limit values :

Substance	CAS number	Country	Type	Value	Unit	Comments	source
Sodium hydroxide	1310-73-2	GBR	OEL Short term	2	mg/m ³		International limit values for chemical agents

SODIUM HYPOCHLORITE

Code: HLH22

Safety Data Sheet compliant with Regulation (EU) 2020/878

Version 7.0.1

Creation date : 08/02/23

Revision: 02/03/23

Print Date : 09/12/23

8.2. Exposure controls

According to the requirements of Directive 98/24 /EC, the employer is required to conduct a risk assessment and implement appropriate risks management measures.

* For any situation where the absence of risk is not proven, he must consider the substitution or reduction of risk by improving in priority processes used and collective protection measures. The effectiveness of the solutions implemented will be checked by measurement in comparison to the statutory limit values for substances defined in Section 8.1.

* If the risk remains after these corrective actions, he must always check by routinely measuring compliance with regulatory OEL if they exist in section 8.1 and apply all the individual protective measures given in section 8.2.

* When formalized risk assessment indicates a low risk to workers' health, control of compliance with regulatory OEL may not be considered and all individual protection measures is not always mandatory.

8.2.1. Appropriate engineering controls :

Ensure adequate ventilation.

Apply the necessary technical measures to comply with the professional exposure limit values.

8.2.2. Individual protection measures, such as personal protective equipment :

Eye/face protection :

Use safety glasses or facial screen in conformity with the EN 166 standard.



Hand protection :

Permeation time \geq 480 min

Thickness: $>$ 0.5 mm

Use chemical resistant gloves approved to EN 374.

Examples of preferred materials for insulating gloves:

Butyl rubber.

Chlorinated polyethylene.

PVC

Wear protective gloves with chemical resistance in PVC, rubber.



Skin protection :

To choose the means of body protection according to the activity and the type of exposure, for example: apron, boots, combination of protection against the chemicals conform to the standards EN 465, EN 466, EN 468.

Respiratory protection :

SODIUM HYPOCHLORITE

Code: HLH22

Safety Data Sheet compliant with Regulation (EU) 2020/878

Version 7.0.1

Creation date : 08/02/23

Revision: 02/03/23

Print Date : 09/12/23

To always carry a respiratory apparatus of protection approved if the limit of exposure in work environment is likely to be exceeded.

P2: Particles, solid aerosols and liquids



Thermal hazards :
Not applicable

Health measures :
Safety shower and eye wash fountain near to workplace.
Handle in accordance with good industrial hygiene practices and the safety instructions.

8.2.3. Environmental exposure controls :

Do not discharge the product directly to sewer or to environment.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on basic physical and chemical properties

Appearance	Clear liquid
Colour	Yellow
Odour	Chlorine
Odour threshold	Not available
Freezing point	Not available
Melting point	< 0 °C
Boiling point	100 - 110 °C
Flammability	Not available
Lower explosive limit	Not applicable
upper explosive limit	Not applicable
Flash point	Not applicable
Auto-ignition temperature	Not applicable
Decomposition temperature	Not available
pH value at 10g/l (20°C)	11.8 - 12.2
Pure pH (20°C)	> 13
kinematic viscosity	Not available
Solubility	Soluble in water in all proportions
Partition coefficient: n-octanol/water	Not available
Vapour pressure	Not available
Relative density	1.26
Mass density	1.26 g/cm ³
Vapour density	Not available
Particle characteristics	Not applicable

SODIUM HYPOCHLORITE

Code: HLH22

Safety Data Sheet compliant with Regulation (EU) 2020/878

Version 7.0.1

Creation date : 08/02/23

Revision: 02/03/23

Print Date : 09/12/23

9.2. Other information

Explosive properties	Not applicable
Oxidising properties	Not applicable
Evaporation rate:	Not available

SECTION 10: STABILITY AND REACTIVITY

10.1. Reactivity

Contact with acids liberates toxic gas.

10.2. Chemical stability

Stable in the recommended storage and handling conditions.

10.3. Possibility of hazardous reactions

Stable in the recommended storage and handling conditions.
Exothermic reactions with acids.

10.4. Conditions to avoid

Light, heat.

10.5. Incompatible materials

Acids.
Fuel matters.
Light metals and/or colored.

10.6. Hazardous decomposition products

In contact with certain metals, release of flammable and/or explosive hydrogen if ignited.
In contact with certain metals (aluminium, zinc...), release of flammable and/or explosive hydrogen if ignited.
Contact with acids liberates gaseous chlorine.
Release of oxygen.

These data are given for the concentrated mixture. The use of the mixture under its diluted form must be performed in conformity with data given by the technical data sheet and the technical adviser.

SECTION 11: TOXICOLOGICAL INFORMATION

11.1. Information on hazard classes as defined in Regulation (EC) N°1272/2008

Substance-related data:

Acute toxicity

Sodium chlorate + Sodium hydroxide + Sodium hypochlorite + Sodium carbonate (15%) : LD 50 - oral male rat (OECD 401):
1,100 mg/kg. - MSDS supplier

Sodium chlorate + Sodium hydroxide + Sodium hypochlorite + Sodium carbonate (15%) : LD 50 - dermal rabbit (OECD 402):
> 20,000 mg/kg. - MSDS supplier

Sodium chlorate + Sodium hydroxide + Sodium hypochlorite + Sodium carbonate (15%) : LC 50 - inhalation - 1 hours male rat

SODIUM HYPOCHLORITE

Code: HLH22

Safety Data Sheet compliant with Regulation (EU) 2020/878

Version 7.0.1

Creation date : 08/02/23

Revision: 02/03/23

Print Date : 09/12/23

(OECD 403): 10.5 mg/L. - MSDS supplier

Sensitisation

Sodium hypochlorite (15%) : guinea-pig (OECD 406 Buehler assay): . Not sensitising - MSDS supplier

Specific target organ toxicity - repeated exposure

Sodium hypochlorite (15%) : NOAEL - oral - 90days male rat (OECD 408): 50 mg/kg bw day. - MSDS supplier

Sodium hypochlorite (15%) : NOAEL - oral - 90days female rat (OECD 408): 57.2 mg/kg bw day. - MSDS supplier

Sodium hypochlorite (15%) : LOAEL- inhalation - 30days rat (OECD 412): ≤ 3 mg/m³. - MSDS supplier

Mix-related data:

Acute toxicity

. Not determined for the mixture.

Skin corrosion/irritation

Skin corrosivity . The mix is considered to be corrosive for the skin under the criteria of Regulation 1272/2008/EC.

Serious damage to eyes/eye irritation

Ocular corrosivity . Causes serious eye damage according to the criteria of Regulation 1272/2008/EC.

Respiratory / skin sensitisation

Skin sensitisation . The mixture is not considered as a skin sensitizer according to 1272/2008/EC Regulation.

Respiratory sensitisation . The mixture is not considered as a respiratory sensitizer according to 1272/2008/EC Regulation.

Mutagenicity

. The classification criteria are not met given the available data.

Carcinogenicity

. The classification criteria are not met given the available data.

Reproductive toxicity

. The classification criteria are not met given the available data.

Specific target organ toxicity - single exposure

. The classification criteria are not met given the available data.

Specific target organ toxicity - repeated exposure

. The classification criteria are not met given the available data.

Aspiration hazard

. The classification criteria are not met given the available data.

Most important symptoms and effects, both acute and delayed :

Skin contact : Corrosive : Causes severe burns.

Eye contact : Causes serious eye damage.

Ingestion : Causes severe burns in mouth and digestive tract.

Risk of perforating digestive tracts.

Inhalation : May cause a respiratory system irritation.

SODIUM HYPOCHLORITE

Code: HLH22

Safety Data Sheet compliant with Regulation (EU) 2020/878

Version **7.0.1**

Creation date : **08/02/23**

Revision: **02/03/23**

Print Date : 09/12/23

11.2. Information on other hazards

11.2.1. Endocrine disrupting properties

Not concerned

SECTION 12: ECOLOGICAL INFORMATION

12.1. à 12.4. Toxicity - Persistence and degradability - Bioaccumulative potential - Mobility in soil

Substance-related data:

Acute toxicity

Sodium hypochlorite (15%) : LC 50 - 96hours fishes 0.06 mg/L. - MSDS supplier

Sodium hypochlorite (15%) : EC 50 - 48hours daphnia (Daphnia magna) (OECD 202): 141 µg/l. - MSDS supplier

Sodium hypochlorite (15%) : EC 50 (Algae (fresh water)) 0.1 mg/L. - MSDS supplier

Chronic toxicity

Sodium hypochlorite (15%) : NOEC - 28days fishes (Menidia peninsulae) 0.04 mg/L. - MSDS supplier

Sodium hypochlorite (15%) : NOEC shellfishes 0.007 mg/L. - MSDS supplier

Sodium hypochlorite (15%) : NOEC (Algae (fresh water)) 0.002,1 mg/L. - MSDS supplier

Mix-related data: :

Acute toxicity

fishes . No data available.

daphnia . No data available.

algae . No data available.

Chronic toxicity

. No data available.

Degradability

. The surface agents contained in this mix are in line with the requirements of the Detergent Regulation 648/2004/EC.

Bioaccumulation

. No data available.

Mobility

. No data available.

Conclusion :

The mixture is considered to be dangerous for the environment according to 1272/2008/EC Regulation.

12.5. Results of PBT and vPvB assessment

This mixture does not contain any substances that are assessed to be a PBT or a vPvB

12.6 Endocrine disrupting properties

Not concerned

12.7. Other adverse effects

SODIUM HYPOCHLORITE

Code: HLH22

Safety Data Sheet compliant with Regulation (EU) 2020/878

Version 7.0.1

Creation date : 08/02/23

Revision: 02/03/23

Print Date : 09/12/23

No additional information available.

SECTION 13: DISPOSAL CONSIDERATIONS

13.1. Waste treatment methods

Treatment of the mixture :

Do not discharge the product directly to sewer or to environment.

Comply with Directive 2008/98/EC of 19/11/2008 amended, relating to waste and to Decision 2000/532/EC (amended ultimately by Decision 2014/955/EC) that establishes a list of hazardous waste that must be taken to an approved centre.

Packaging treatment :

Rinse thoroughly the packaging with water and treat the effluent like wastes.

Comply with Directive 2008/98/EC of 19/11/2008 amended, relating to waste and to Decision 2000/532/EC (amended ultimately by Decision 2014/955/EC) that establishes a list of hazardous waste that must be taken to an approved centre.

SECTION 14: TRANSPORT INFORMATION

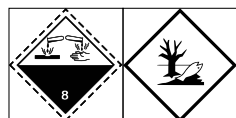
ROAD TRANSPORT: Rail/Route (RID/ADR)

14.1 UN number or ID number : 1791

14.2 UN proper shipping name :
HYPOCHLORITE SOLUTION

14.3 Transport hazard class(es) : 8

14.4 Packing group : II
Hazard identification number : 80
Label : 8



Tunnel code : (E)

14.5 Environmental hazards : Yes (Sodium hypochlorite)

14.6 Special precautions for user : No information.

Limited Quantity (QL): 1l

MARITIME TRANSPORT : IMDG

SODIUM HYPOCHLORITE

Code: HLH22

Safety Data Sheet compliant with Regulation (EU) 2020/878

Version 7.0.1

Creation date : 08/02/23

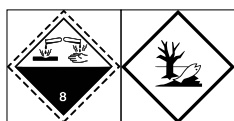
Revision: 02/03/23

Print Date : 09/12/23

14.1 UN number or ID number :1791

14.2 UN proper shipping name : HYPOCHLORITE SOLUTION

14.3 Transport hazard class(es) : 8



14.4 Packing group : II

14.5 Environmental hazards

Marine pollutant : Yes (Sodium hypochlorite)

14.6 Special precautions for user : No information.

EmS number : F-A, S-B

Limited Quantity (QL): 1I

14.7 Maritime transport in bulk according to IMO instruments : Not concerned

SECTION 15: REGULATORY INFORMATION

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

Regulation (EU) n°528/2012 concerning the making available on the market and use of biocidal products :
Active ingredient: Sodium hypochlorite

Regulations relating to the hazards from major accidents :
SEVESO 3 Directive (2012/18/EC) : E1

Regulations relating to the classification, packaging and labelling of substances and mixtures :
Regulation (EC) 1272/2008 amended.

Waste regulations :
2008/98/EC Directive amended by 2015/1127/EC Directive - Regulation 1357/2014/EC
Decision 2014/955/EC which establishes the list of hazardous waste.

Regulation (EU) No 649/2012 of the European Parliament and of the Council of 4 July 2012 concerning the export and import of hazardous chemicals : Not concerned

Protection of workers :
Directive 98/24/EC of 07/04/1998 on the protection of the health and safety of workers from the risks related to chemical agents at work.

Regulation (EU) 2019/1021 of 20 June 2019 on persistent organic pollutants : Not applicable

SODIUM HYPOCHLORITE

Code: HLH22

Safety Data Sheet compliant with Regulation (EU) 2020/878

Version 7.0.1

Creation date : 08/02/23

Revision: 02/03/23

Print Date : 09/12/23

Regulation (EC) 1005/2009 amended on substances that deplete the ozone layer : Not applicable

Regulation (EU) 2019/1148 of the European Parliament and of the Council of 20 June 2019 on the marketing and use of explosives precursors:

1

Regulation (EC) 648/2004 :
Not concerned

Comply with national and local legislation.

UN Globally Harmonised System (GHS) on Classification and Labelling of Chemical (GB CLP - SI 2020 No. 1567) and UK REACH (SI 2020 No. 1577)

15.2. Chemical safety assessment

This safety data sheet has been drafted taking into account the information from exposure scenarios for the substances making up the mixture.

SECTION 16: OTHER INFORMATION

The safety data sheet is additional to the technical data sheet but does not replace it. The information given here in is to the best of our knowledge correct and is given in good faith. We must also draw the user's attention on potential risks of the product is used for other purposes for which the product is known.

In no way does it exempt users from being aware of and complying with regulations applicable to their activity. It is their sole responsibility to take all necessary precautions in accordance to the usage of the product they are aware of.

Regulations are only stated in order to help users fulfill the duties involved in the use of the product.

This description should not be considered as exhaustive. It does not exempt users from ensuring if other demands need to be complied with-according to other laws than the ones hereby stated and applicable to holding and usage of the product-demands for which they will remain sole responsibility.

Section(s) modified compared with the previous version :

SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

List of H phrases referred to in section 3 :

EUH 031 : Contact with acids liberates toxic gas.

H271 : May cause fire or explosion; strong oxidiser.

H290 : May be corrosive to metals.

H302 : Harmful if swallowed.

H314 : Causes severe skin burns and eye damage.

H319 : Causes serious eye irritation.

H335 : May cause respiratory irritation.

H400 : Very toxic to aquatic life.

H410 : Very toxic to aquatic life with long lasting effects.

H411 : Toxic to aquatic life with long lasting effects.

SODIUM HYPOCHLORITE

Code: HLH22

Safety Data Sheet compliant with Regulation (EU) 2020/878

Version **7.0.1**

Creation date : **08/02/23**

Revision: **02/03/23**

Print Date : 09/12/23

Sources of key data used to compile the data sheet :
MSDS supplier

Historical :
Version 7.0.1
Cancels and replaces previous version 7.0.