SODIUM HYPOCHLORIDE/NaOCl

Date of SDS : 12.05.2023 Date of revision : -
Revision no. : 0 SDS Number : GBF - 4507

1- IDENTIFICATION OF THE SUBSTANCE AND OF THE COMPANY/UNDERTAKING

1.1- Product Identifier:

Product Name	**SODIUM HYPOCHLORIDE/NaOCl**
CAS No	7681-52-9
EC No	231-668-3
UFI Code	No data available

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

Identified uses	Used in textile bleaching, household and laundry bleaching, water chlorination and general disinfection, chemical reactions such as chlorination, and disinfection of drinking and utility water.
Used advised against	Do not use for squirting or spraying. Do not use for products which come into direct contact with the skin. Do not use for products which come into contact with foodstuffs. Do not use for private purposes (household).

1.3- Details of the supplier of the safety data sheet:

Company	**Koyuncu Nakliye Pazarlama A.Ş./Koyuncu Kimya**
Address	Fevzi Çakmak Mah. 10787 Kapı No: 287 Karatay-Konya/Türkiye
Tel/Fax	+90 505 210 75 21
E-mail	Onder.sungu@koyuncu.com

1.4- Emergency telephone number:

+90 505 210 75 21

2- HAZARDS IDENTIFICATION

2.1- Classification of the substance or mixture:

Classification according to Regulation (EC) No. 1272/2008 [CLP]

May be corrosive to metals, Category 1, H290
Causes severe skin burns and eye damage/Skin Irritation, Category 1, H314
Very toxic to aquatic life, Category 1, H400
Harmful to aquatic life with long lasting effects, Category 3, H412

Notes: For the full text of the H sentences mentioned in this Section, see Section 16.

2.2- Label elements (according to EC 1272/2008):

Labelling according to Regulation (EC) No. 1272/2008 [CLP]

GHS Pictograms

GHS05 GHS09

Signal word	Danger
Contains	Sodium Hypochloride

Hazard statements

H290 May be corrosive to metals.
H314 Causes severe skin burns and eye damage.
H400 Very toxic to aquatic life.
H412 Harmful to aquatic life with long lasting effects.

Precautionary statements

Prevention

P260 Do not breathe dust/fume/gas/mist/vapours/spray.
P273 Avoid release to the environment.
P280 Wear protective gloves/protective clothing/eye protection/face protection/hearing protection/...

Response

P303 + P361 + P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with wa0ter [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.
P310 Immediately call a POISON CENTER/doctor/...
P390 Absorb spillage to prevent material damage.

Supplementary Hazard Statement Code(s)

EUH031 Contact with acids liberates toxic gas.

2.3- Other hazards

On the basis of available data, the product does not contain any PBT or vPvB in percentage ≥ than 0.1%.
The product does not contain substances with endocrine disrupting properties in concentration ≥ 0.1%.

3- COMPOSITION/INFORMATION ON INGREDIENTS

3.1- Substances

Not applicable

3.2- Mixtures

Description of the mixture:

Chemical Name	EC No.	CAS No.	%	Classification
Sodium hypochlorite, solution ... % Cl active	231-668-3	7681-52-9	15-19	Met. Corr. 1, H290 Skin Corr. 1B - H314 Aquatic Acute 1, H400 Aquatic Chronic 2, H411
Water	231-791-2	7732-18-5	Bakiye	Not Classified.

Chemical Name	EC No.	CAS No.	Specific concentration limits	M-factors	ATE
Sodium hypochlorite, solution ... % Cl active	231-668-3	7681-52-9	EUH031: C ≥ 5 %	M-factor (acute) = 10.0	1.100 mg/kg (Oral)

Notes: The full text for all H-statements is displayed in section 16.

4- FIRST AID MEASURES

4.1- Description of first aid measures

General information:

Call a physician immediately. Never give anything by mouth to an unconscious person. People with over sensibility problems are not allowed to work or be exposed to the product. In all cases of doubt, or when symptoms persist, seek medical attention.

After skin contact

Remove contaminated clothing and shoes. Immediately wash skin thoroughly with soap and plenty of water for at least 15 minutes. If skin irritation occurs: Get medical advice/attention. Wash contaminated clothing before reuse.

After eye contact

Carefully rinse eyes with plenty of water, including under the eyelids, for several minutes. Do not rub your eyes. Remove contact lenses if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.

After inhalation

Immediately remove person to fresh air and keep comfortable for breathing. Wash nose and mouth with water. Oxygen may be administered to the person by properly trained personnel when breathing difficulties occur. If the problem persists, get the doctor/physician.

After ingestion

If swallowed, rinse the patient's mouth with clean water and then drink plenty of water or milk. DO NOT induce vomiting. Never give anything by mouth if unconscious. Consult the doctor.

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

Skin contact	Causes severe burns. Symptoms following overexposure may include the following: Pain or irritation. Redness. Blistering may occur.
Eye contact	Causes serious eye damage. Symptoms following overexposure may include the following: Pain. Profuse watering of the eyes. Redness
Inhalation	Corrosive to the respiratory tract
Ingestion	May cause chemical burns in mouth, oesophagus and stomach.

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

Treat symptomatically and supportively.

5- FIRE FIGHTING MEASURES

5.1- Extinguishing Media

Suitable extinguishing media

Foam, dry chemicals, carbon dioxide and water mist must be used. The fire should be reported in large fires. Care should always be taken to create an escape route in the fire.

Unsuitable extinguishing media

Do not use water jet as an extinguisher, as this will spread the fire. Simultaneous use of foam and water on the same surface is to be avoided as water destroys the foam.

5.2- Special hazards arising from the substance or mixture

May emit toxic gases as hydrogen chloride gas, etc.

5.3- Advice for firefighters

Avoid breathing fire vapours. Self-contained breathing apparatus and full protective clothing must be worn in case of fire. Wear a protective face mask, protective gloves, boots and safety helmet.

6- ACCIDENTAL RELEASE MEASURES

6.1- Personal precautions, protective equipment and emergency procedures

6.1.1- For non-emergency personnel:

Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Wear appropriate protective equipment and clothing during clean-up. Ensure adequate ventilation. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see section 8 of the SDS.

6.1.2- For emergency responders:

Keep unnecessary personnel away. Use personal protection recommended in Section 8 of the SDS.

6.2- Environmental precautions

Avoid release to the environment. Prevent further leakage or spillage if safe to do so. Prohibit entry to the area until the clean-up job is complete. Ventilate the area.Avoid discharge into drains, water courses or onto the ground.

6.3- Methods and material for containment and cleaning up

Stop leak if without risk. Move containers from spill area. Provide appropriate personal protection. Clean the spillage mechanically (vacuum cleaner etc.) or collect it with a non-flammable absorbent material (eg sand, earth, etc.) or similar absorbent material (Chemizorb, vermiculite, sand, diatomite or similar inert material). Wash the spill area with water. Dispose of collected material or solid waste according to local regulations.

6.4- Reference to other sections

For information on safe handling see section 7, for information on personal protection equipment see section 8, for disposal-related information see section 13.

7- HANDLING AND STORAGE

7.1- Precautions for safe handling

Provide good ventilation in the workplace. Follow industrial hygiene standards and common rules to prevent inhalation, ingestion, exposure to the skin during use of chemicals. Remove contaminated clothing and wash before using again. Do not eat, drink or smoke when using this product. Do not get in contact with food, drinks or animal feed. Eyewash and shower should be available in the process area and where it is used.

7.2- Conditions for safe storage, including any incompatibilities

Store in well-ventilated, dry and cool places. Keep containers closed and upright, protecting them from physical damage. Store in closed original packaging. Protect containers from physical damage. Follow the general rules used for storing chemicals. Protect containers from heat, sunlight. Even if containers are empty, they may contain product residue or vapours. Treat even empty containers as if they were full. Keep away from incompatible materials. Make sure the packaging cover is tightly closed. Follow local regulations. Do not keep the container sealed. Store in its original packaging.

Due to the limited shelf life of sodium hypochlorite, long-term storage is not possible. Keep the storage temperature below 29 °C.

7.3- Specific end use(s)

The identified uses for this product are detailed in Section 1.2.

8- EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1- Control parameters

Contains no substances with occupational exposure limit values

8.2- Exposure controls

8.2.1- Appropriate engineering controls:

Make sure the working environment is well ventilated. Handle in accordance with industrial hygiene and safety rules. Wash your hands before taking a break from work and at the end of the day. Keep away from foodstuffs, beverages and animal feed. Immediately remove contaminated clothing. Wash your hands at the end of work and when taking a break from work. Do not eat or drink any food while using this product.

Ensure that there is an eye and/or body shower near the work area.

8.2.2- Individual protective measures, such as personal protective equipment:

Respiratory protection:

Respiratory protection is required if the overall level exceeds the recommended occupational exposure limits for work. Self-contained breathing apparatus. Filter P2. Suitable half mask (EN 143).

Hands protection:

Use protective gloves.
It is sufficient to consider puncture resistance, permeability rates and deterioration in selection of gloves. Selected protective gloves must comply with EN 374 standards.

Glove material:

Gloves made of butyl rubber, material thickness >0,11 mm, breakthrough times of the glove material >480 minutes (permeation: level 6)

Eye protection:

Use safety goggles or face masks that have been tested and approved in accordance with standards such as EN 166 (EU). Contact lenses should not be worn. Use face shields where there is a high risk of splashing and where there is a risk of direct contact with vapors.

Body Protection:

Choose appropriate body protection according to the type, concentration and amount of dangerous substance, and workplace conditions. Use waterproof clothing or a chemical suit in accordance with EN 14605.

Hygiene measures

Wash your hands after handling the material, before eating, drinking and/or before smoking. Immediately remove all contaminated clothing. In case of skin contamination, wash immediately with soap and water. Do not eat, drink or smoke during use. Keep contaminated clothing separate and wash before reuse.

8.2.3- Environmental Exposure Controls

The provisions of existing legislation for the protection of the environment must be fully implemented.

9- PHYSICAL AND CHEMICAL PROPERTIES

9.1- Information on basic physical and chemical properties

Properties	Value	Information
Physical state	: Liquid	
Colour	: Clear yellowish	
Odour	: Chlorine	
pH Value	: 11-12	@ 20˚C (1% sol.n)
Melting point/freezing point (˚C)	: -25	@ 760 mmHg
Boiling point or initial boiling point and boiling range	: 110 ˚C	@ 760 mmHg
Evaporation rate (butylacetate=1)	: No data available	
Flammability	: Not applicable	
Flash point (˚C)	: Not applicable	
Upper/lower flammability or explosive limits	: Not applicable	
Vapor pressure, kPa	: No data available	
Relative vapour density	: No data available	
Density and/or Relative density	: 1.200-1.230 gr/cm^3	@ 20 ˚C
Solubility in water	: Soluble in water	

Properties	Value	Information
Partition coefficient: n-octanol/water	: No data available	
Auto-ignition temperature (°C)	: Not applicable	
Decomposition temperature (°C)	: No data available	
Viscosity, mPa's	: No data available	@ 20°C
Particle size	: No data available	
Particle size distribution	: No data available	

9.2- Other information:

9.2.1- Information with regard to physical hazard classes:

No data available

9.2.2- Other safety characteristics:

Explosive properties	: No explosive properties.
Oxidising property	: No oxidizing property.

10- STABILITY AND REACTIVITY

10.1- Reactivity

The product is stable and non-reactive under normal conditions of use, storage and transport.

10.2- Chemical stability

Stable under recommended handling and storage conditions. Sensitivity to light.

10.3- Possibility of hazardous reactions

Violent reactions possible with: Generates dangerous gases or fumes in contact with: Acids.
The generally known reaction partners of water.

10.4- Conditions to avoid

Incompatible products. Excess heat. Protect from light. Product degrades more rapidly with increasing temperature.

10.5- Incompatible materials

Strong acids, Organic materials, Powdered metals, Forms shock-sensitive mixtures with certain other materials., Amines, Reacts violently with ammonium salts, aziridine, methanol, and phenylaceto primary aliphatic or aromatic amines to form explosively unstable n-chlor 55°C.

10.6- Hazardous decomposition products

Does not decompose when used and stored as recommended. Thermal decomposition or combustion products may include the following substances: Corrosive gases or vapours.

11- TOXICOLOGICAL INFORMATION

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

Acute toxicity

Sodium hypochlorite (CAS# 7681-52-9)	
LD50 oral (rat)	1 100 mg/kg bw
LD50 dermal (rabbit)	> 20 000 mg/kg bw
LC50 inhalation (rat)	> 10.5 mg/L air 1 h

Skin corrosion/irritation

Causes severe skin burns.

Serious eye damage/irritation

Causes severe eye damage

Respiratory or Skin Sensitization

Based on available data, the classification criteria are not met.

Germ cell mutagenicity

Based on available data, the classification criteria are not met.

Carcinogenity

Based on available data, the classification criteria are not met.

Reproductive toxicity

Based on available data, the classification criteria are not met.

Specific Target Organ Toxicity (Single Exposure)

Based on available data, the classification criteria are not met.

Specific Target Organ Toxicity (Repeated Exposure)

Based on available data, the classification criteria are not met.

Aspiration Hazard

Based on available data, the classification criteria are not met.

11.2- Information on other hazards

11.2.1- Endocrine disrupting properties

No test data is available for the mixture.

11.2.2- Other information

No test data is available for the mixture.

12- ECOLOGICAL INFORMATION

The product is classified as environmentally hazardous. Very toxic to aquatic life, Category 1, H400. Harmful to aquatic life with long lasting effects, Category 3, H412.

12.1- Toxicity

Sodium hypochlorite (CAS# 7681-52-9)		
LC50 Fish	0.032 mg TRO /L, 96 Hours	
EC50 Crustacea	141 µg/L, 48 Hours	(Daphnia magna)
EC50 Algae	0.036 mg/L, 72 Hours	(Raphidocelis subcapitata)

12.2- Persistence and degradability

No data available.

12.3- Bioaccumulative potential

No data available.

12.4- Mobility in soil

No data available.

12.5- Results of PBT and vPvB assessment

This product does not contain any substances classified as PBT or vPvB.

12.6- Endocrine disrupting properties

No data available.

12.7- Other adverse effects

No data available.

13- DISPOSAL CONSIDERATIONS

13.1- Waste treatment methods

Residual waste

Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).

Contaminated packaging

Since emptied containers may retain product residue, follow label warnings even after container is emptied. Empty containers should be taken to an approved waste handling site for recycling or disposal.

14- TRANSPORT INFORMATION

Land transport (ADR/RID)

14.1-	UN number	UN1791
14.2-	UN proper shipping name	HYPOCHLORITE SOLUTIONS
14.3-	Transport hazard class(es)	8
14.4-	Packing Group	III
14.5-	Environmental hazard	Yes
14.6-	Maritime transport in bulk according to IMO instruments	Not applicable.
	Classification code (ADR/RID)	C9
	Limited Quantity (ADR/RID)	5 L
	Exceptional amount (ADR/RID)	E1
	Tank code (ADR/RID)	L4BV(+)
	Vehicle for tank carriage	AT
	Tunnel code	3 (E)
	Orange plate	80 1791

Sea transport (IMDG Code)

14.1-	UN number	UN1791
14.2-	UN proper shipping name	HYPOCHLORITE SOLUTIONS
14.3-	Transport hazard class(es)	8
14.4-	Packing Group	III
14.5-	Environmental hazard	Yes
	Marine pollutant:	Yes
14.6-	Maritime transport in bulk according to IMO instruments	Not applicable.
	Limited Quantity (IMDG)	5 L
	Exceptional amount (IMDG)	E1
	EmS No (Fire)	F-A
	N*FS (Spill)	S-B

Air transport (ICAO-IATA/DGR)

14.1-	UN number	UN1791
14.2-	UN proper shipping name	HYPOCHLORITE SOLUTIONS
14.3-	Transport hazard class(es)	8
14.4-	Packing Group	III
14.5-	Environmental hazard	Yes
14.6-	Maritime transport in bulk according to IMO instruments	Not applicable.

15- REGULATORY INFORMATION

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

- Regulation (EC) No 1907/2006, (REACH),
- Commission Regulation (EU) No 453/2010 amending Regulation (EC) No 1907/2006,
- Regulation (EC) No 1272/2008 (CLP),
- Commission Directive 2000/39/EC.
- Commission Directive 2006/15/EC,
- ADR - European Agreement Concerning the International Carriage of Dangerous Goods by Road

15.2- Chemical safety assessment

A chemical safety assessment has not been performed for this product.

16- OTHER INFORMATION

Full text of any H-statements not written out in full under Sections 2 to 15

H290	May be corrosive to metals.
H314	Causes severe skin burns and eye damage.
H400	Very toxic to aquatic life.
H411	Toxic to aquatic life with long lasting effects.
H412	Harmful to aquatic life with long lasting effects.

List of abbreviations

ADN	European Agreement concerning the international Carriage of Dangerous Goods by Inlands Waterways
ADR	European Agreement Concerning the Int. Carriage of Dangerous Goods by Road
CAS No	Chemical Abstract Service Index Number
CLP	Regulation of Classification, Labelling and Packaging of Chemicals
EC No	European Commission Number
GHS	Globally Harmonized System of Classification and Labelling of Chemicals
IATA	International Air Transport Association
ICAO	International Civil Aviation Organization
IMDG	International Maritime Code for Dangerous Goods
LD50	Dosage producing 50% mortality
PBT	Persistent, Bioaccumulative, Toxic
REACH	Regulation on the Registration, Evaluation, Authorisation and Restriction of Chemicals in the European Union
RID	International Rule for Transport of Dangerous Substances by Railway
STEL	Short Term Exposure Limit

TWA	Time Weighted Average
vPvB	Very Persistent, Very Bioaccumulative

Other Information:

Date Prepared	: May.12th, 2023
Version No	: 1.0
Revision Date	: -
Organized by	: Gultekin Baskoylu (Chemist)

Training information

In addition to health, safety and environmental training programs for their workers, companies must ensure that workers read, understand and apply the requirements of this SDS to ensure human health and environmental protection.

Sources of information:

- ECHA and related EU directives,
- UN ADR, IMDG, IATA lists,
- Safety data sheets for raw materials and product components,
- Other helpful resources.

Classification Calculation Methods

- Chemical and physical hazards: Product classification is inferred from the criteria determined according to the REACH Directive (1907/2006), Annex I, Part 2. Data for the evaluation of chemical-physical properties are given in Chapter 9.
- Health hazards: Product classification is based on the calculation methods set out in Annex 1, Section 3 of the REACH Directive (1907/2006), unless otherwise stated in Chapter 11.
- Environmental hazards: Product classification is based on the calculation methods set out in Annex 1, Section 4 of the REACH Directive (1907/2006), unless otherwise stated in Chapter 12.

Disclaimer

This information relates to a specific product and is not available for use in combination with any process or with any other material. Do not use on other application(s) without consulting the manufacturer. Information about the product in this Safety Data Sheet has been compiled from knowledge of the individual components. The data given here is based on current knowledge and experience. This Safety Data Sheet analyzes the product in terms of safety requirements and does not give any guarantee of the properties for the product. Usage of the information remains under the sole responsibility of the user.

Editor's note:

This SDS has been drawn up based on the information and documents received from the product owner company. The preparer of the SDS cannot be held responsible for the erroneous arrangement of the prepared SDS due to incomplete or incorrect information and documents, and for the material and moral damages that the product owner company may encounter due to this reason.