

## SAFETY DATA SHEET

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

## 1.1 Product identifier

- Datasheet Number: SP001 Version 2.0.0
- Product Name: Sodium Hypochlorite
- Chemical Name: Sodium hypochlorite, solution 10-15% Cl active
- Synonyms: Hypochlorous acid, sodium salt (NaOCl), bleach

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

- Use of the substance/mixture: Pool / spa treatment; Biocide
- Use advised against: No information available

## 1.3 Details of the supplier of the safety data sheet

- Name of Supplier: Total Pool Chemicals Ltd
- Address of Supplier: Unit 1-5 , Pool Bank Business Park  
High Street, Tarvin  
Chester  
UK  
CH3 8JH
- Telephone: +44 (0)1829 740290
- Email: sales@totalpool.co.uk

## 1.4 Emergency telephone number

- +44 (0)1829 740290 (Office Hours)

**SECTION 2: Hazards identification**

## 2.1 Classification of the substance or mixture

- Classification (REGULATION (EC) No 1272/2008) [CLP/GHS]: Met. Corr. 1, H290; Skin Corr. 1B, H314; Eye Dam. 1, H318; Aquatic Acute 1, H400; Aquatic Chronic 2, H411; EUH031; EUH206
- Additional information: For full text of Hazard- and EU Hazard-statements: see section 16

## 2.2 Label elements



- Signal Word: Danger
- Hazard statements
  - H290 - May be corrosive to metals.
  - H314 - Causes severe skin burns and eye damage.
  - H410 - Very toxic to aquatic life with long lasting effects.
- Precautionary statements
  - P102 - Keep out of reach of children.
  - P273 - Avoid release to the environment.
  - P280 - Wear protective gloves/protective clothing/eye protection/face protection.
  - P303+P361+P353+P310 - IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower. Immediately call a POISON CENTER or doctor/physician.
  - P305+P351+P338+P310 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or doctor/physician.
  - P501 - Dispose of contents/container to an authorised waste collection point

Revision: 1 September 2020

## SECTION 2: Hazards identification (....)

- Supplemental Hazard information (EU)
  - 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

- Not a PBT according to REACH Annex XIII
- Not a vPvB according to REACH Annex XIII

## SECTION 3: Composition/information on ingredients

### 3.1 Substances

- Not applicable

### 3.2 Mixtures

- Contains the following hazardous ingredients or ingredients with a workplace exposure limit:

Chemical Name	Conc.	CAS No.	EC No.	Classification (REGULATION (EC) No 1272/2008) [CLP/GHS]	REACH Registration Number	SCL/ M-Factor/ ATE	WEL/ OEL
Sodium hypochlorite, solution ... % Cl active	10-15%	7681-52-9	231-668-3	Met. Corr. 1, H290; Skin Corr. 1B, H314; Eye Dam. 1, H318; Aquatic Acute 1, H400; Aquatic Chronic 1, H410; EUH031	01-2119488154-34-XXXX	EUH031: C ≥ 5 % M=10 M(Chronic)=1	No
Sodium hydroxide; Caustic soda	<1%	1310-73-2	215-185-5	Met. Corr. 1, H290; Skin Corr. 1A, H314; Eye Dam. 1, H318	-	Eye Irrit. 2; H319: 0,5 % ≤ C < 2 % Skin Corr. 1A; H314: C ≥ 5 % Skin Corr. 1B; H314: 2 % ≤ C < 5 % Skin Irrit. 2; H315: 0,5 % ≤ C < 2 %	Yes

## SECTION 4: First aid measures

Rescuers should put on approved personal protective equipment (PPE) before administering first aid

Rescuers should take suitable precautions to avoid becoming casualties themselves

### 4.1 Description of first aid measures

- Contact with eyes
  - If substance has got into eyes, immediately wash out with plenty of water for several minutes
  - Irrigate eyes thoroughly whilst lifting eyelids
  - Remove contact lenses, if present and easy to do. Continue rinsing.
  - Get immediate medical advice/attention.
- Contact with skin
  - After contact with skin, take off immediately all contaminated clothing, and wash immediately with plenty of soap and water
  - Contaminated clothing should be laundered before reuse
  - Get immediate medical advice/attention.
- Ingestion
  - Rinse mouth with water (do not swallow)
  - Give plenty of water to drink
  - Do NOT induce vomiting.

---

**SECTION 4: First aid measures (....)**

Get immediate medical advice/attention.

- Inhalation  
If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing.  
IF exposed or concerned: Get medical advice/attention.

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

- Contact with eyes  
Causes redness and swelling  
May cause severe damage with formation of corneal ulcers and permanent impairment of vision.
- Contact with skin  
May cause severe burns with permanent skin damage which are slow to heal.  
Possible blistering of the skin of affected areas
- Ingestion  
May cause burns to mouth and throat  
May cause damage to the stomach lining  
May cause nausea/vomiting  
May cause stomach pain
- Inhalation  
May cause respiratory tract irritation.  
May cause coughing and tightness of chest  
May cause breathing difficulty

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

- Treat symptomatically

---

**SECTION 5: Firefighting measures****5.1 Extinguishing media**

- Suitable extinguishing media: Not flammable. In case of fire use extinguishing media appropriate to surrounding conditions
- Unsuitable extinguishing media: High volume water jet

**5.2 Special hazards arising from the substance or mixture**

- Gives off irritating or toxic fumes (or gases) in a fire.
- Decomposition products include chlorine.

**5.3 Advice for firefighters**

- Move containers from fire area if this can be done without risk
- Exothermic reaction on heating
- Keep container(s) exposed to fire cool, by spraying with water
- Collect contaminated fire extinguishing water separately. This MUST not be discharged into drains. Prevent fire extinguishing water from contaminating surface or ground water.
- Special protective equipment: Wear self-contained breathing apparatus (SCBA). Wear full protective clothing including chemical protection suit.

---

**SECTION 6: Accidental release measures****6.1 Personal precautions, protective equipment and emergency procedures**

- No action shall be taken involving any personal risk or without suitable training
- Only trained and authorised personnel should carry out emergency response

Revision: 1 September 2020

---

**SECTION 6: Accidental release measures (....)**

- Personal precautions for non-emergency personnel: Avoid breathing vapours, mist or gas; Wear protective clothing as per section 8; Wash thoroughly after handling.
- Personal precautions for emergency responders: Evacuate the area and keep personnel upwind; Wear self-contained breathing apparatus (SCBA); Wear suitable protective clothing, eye/face protection and gloves; Natural rubber are recommended

**6.2 Environmental precautions**

- Avoid release to the environment.
- Do not allow to enter public sewers and watercourses
- If contamination of drainage systems or water courses is unavoidable, immediately inform appropriate authorities

**6.3 Methods and material for containment and cleaning up**

- Stop leak if safe to do so.
- Cover drains to prevent the product from entering the environment.
- Small spills  
Wipe up spillage with damp absorbent cloth or towel
- Large spills  
Dyke to prevent entry to sewer or waterway. Transfer liquid to a holding container  
Absorb spillage in inert material and shovel up  
Sweep or shovel-up spillage and remove to a safe place  
Place in sealable container  
Seal containers and label them  
Remove contaminated material to safe location for subsequent disposal  
Seek expert advice for removal and disposal of all contaminated materials and wastes  
Flush spill area with copious amounts of water  
Contaminated water can be neutralised with a sodium thiosulphate solution

**6.4 Reference to other sections**

- See section(s): 7, 8 & 13
- 

**SECTION 7: Handling and storage****7.1 Precautions for safe handling**

- Use only in well ventilated areas
- Avoid breathing vapours, mist or gas
- Avoid contact with skin and eyes
- Avoid contact with metals
- Do not mix with other chemicals
- Wear protective clothing as per section 8
- Do not eat, drink or smoke when using this product.
- Contaminated clothing should be laundered before reuse
- Contaminated work clothing should not be allowed out of the workplace.
- Use good personal hygiene practices
- Wash thoroughly after handling.
- Ensure eyewash stations and safety showers are nearby

**7.2 Conditions for safe storage, including any incompatibilities**

- Keep in a cool, dry, well ventilated place
- Keep in vented containers
- Store in corrosive resistant container with a resistant inner liner.
- Keep in an area equipped with impermeable flooring.
- Protect from sunlight.
- Keep away from heat
- Incompatible with metals
- Incompatible with acid

Revision: 1 September 2020

---

**SECTION 7: Handling and storage (....)**

- Keep away from: acids, ammonia solutions, amines and methanol
- Keep away from food, drink and animal feedingstuffs

## 7.3 Specific end use(s)

- Pool / spa treatment
- 

**SECTION 8: Exposure controls/personal protection**

## 8.1 Control parameters

- If this product contains ingredients with exposure limits, personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment.  
Reference should be made to monitoring standards, such as the following: European Standard EN 689 (Workplace exposure - Measurement of exposure by inhalation to chemical agents - Strategy for testing compliance with occupational exposure limit values). European Standard EN 14042 (Workplace atmospheres. Guide for the application and use of procedures for the assessment of exposure to chemical and biological agents). European Standard EN 482 (Workplace exposure. General requirements for the performance of procedures for the measurement of chemical agents). Reference to national guidance documents for methods for the determination of hazardous substances will also be required.
- Decomposition products may include chlorine
- Chlorine  
(EU) OELV (short term limit value) 0.5 ppm 1.5 mg/m<sup>3</sup>  
WEL (short term limit value) 0.5 ppm 1.5 mg/m<sup>3</sup> (UK)
- Sodium hypochlorite  
DNEL (inhalational) 1.55 mg/m<sup>3</sup> Industry, Long Term, Systemic Effects  
DNEL (inhalational) 3.1 mg/m<sup>3</sup> Industry, Acute/Short Term, Systemic Effects  
DNEL (inhalational) 1.55 mg/m<sup>3</sup> Industry, Long Term, Local Effects  
DNEL (inhalational) 3.1 mg/m<sup>3</sup> Industry, Acute/Short Term, Local Effects  
DNEL (inhalational) 1.55 mg/m<sup>3</sup> Consumer, Long Term, Systemic Effects  
DNEL (inhalational) 3.1 mg/m<sup>3</sup> Consumer, Acute/Short Term, Systemic Effects  
DNEL (inhalational) 1.55 mg/m<sup>3</sup> Consumer, Long Term, Local Effects  
DNEL (inhalational) 3.1 mg/m<sup>3</sup> Industry, Acute/Short Term, Local Effects  
DNEL (oral) 260 µg/kg (bw/day) Consumer, Long Term, Systemic Effects  
PNEC aqua (freshwater) 210 ng/l  
PNEC aqua (intermittent releases, freshwater) 260 ng/l  
PNEC aqua (marine water) 42 ng/l  
PNEC (STP) 4.69 mg/l  
PNEC secondary poisoning (food) 11.1 mg/kg
- Sodium Hydroxide  
WEL (short term) 2 mg/m<sup>3</sup> (UK)  
DNEL (inhalational) 1 mg/m<sup>3</sup> Industry, Long Term, Local Effects  
DNEL (inhalational) 1 mg/m<sup>3</sup> Consumer, Long Term, Local Effects

## 8.2 Exposure controls

- Selection and use of personal protective equipment should be based on a risk assessment of exposure potential
  - Engineering controls  
Ensure adequate ventilation  
Provide sufficient air exchange and/or exhaust in work rooms.  
Use local exhaust ventilation and/or enclosures.
  - Respiratory protection  
In case of insufficient ventilation, wear suitable respiratory equipment  
Where a full face mask respirator is required, use EN 136, with gas/vapour filter EN 14387 type ABEK
-

Revision: 1 September 2020

## SECTION 8: Exposure controls/personal protection (....)

Where a reusable half mask respirator is required, use EN 140, with gas/vapour filter EN 14387 type ABEK, or EN 405; EN 1827

- Eye/face protection  
Wear goggles giving complete eye protection approved to standard EN 166.  
If risk of splashing, wear face-shield approved to standard EN 166 1B39N
- Skin protection  
Wear protective gloves. The selected protective gloves have to satisfy the specifications of EU Directive 89/686/EEC and standard EN 374.  
The selection of a suitable glove depends on work conditions and whether the product is present on its own or in combination with other substances. Breakthrough time is dependent on the characteristics of the brand of glove used and the supplier should be consulted.  
PVC or rubber gloves are recommended  
Wear suitable protective clothing  
Contaminated work clothing should not be allowed out of the workplace.  
Contaminated clothing should be laundered before reuse
- Hygiene measures  
Do not eat, drink or smoke when using this product.  
Use good personal hygiene practices  
Wash thoroughly after handling.  
Ensure eyewash stations and safety showers are nearby
- Environmental exposure controls  
Do not empty into drains  
Do not allow to penetrate the ground/soil.



## SECTION 9: Physical and chemical properties

### 9.1 Information on basic physical and chemical properties

- Appearance: Liquid; green/yellow
- Odour: Smells of chlorine
- Odour threshold: No information available
- pH: > 13 (concentrated solution)
- Melting point/freezing point: -17 °C
- Initial boiling point and boiling range: 110 °C
- Flashpoint: Not applicable
- Evaporation Rate: No information available
- Flammability (solid,gas): Not flammable
- Upper/lower flammability or explosive limits: Not applicable
- Vapour Pressure: 0 - 2 500 Pa @ 20 °C (sodium hypochlorite)
- Vapour Density: Not applicable
- Relative Density: 5%: ~1.10 15%: 1.26 @ 20°C
- Solubility(ies): 1 000 g/L @ 25 °C and pH 12.5 (sodium hypochlorite)
- Partition Coefficient (n-Octanol/Water): Log Kow (Log Pow) -3.42 @ 20 °C and pH 12.5 (sodium hypochlorite)
- Autoignition Temperature: No information available
- Decomposition temperature: No information available
- Viscosity: No information available
- Explosive Properties: Not applicable
- Oxidising properties: Not oxidising

Revision: 1 September 2020

---

**SECTION 9: Physical and chemical properties (....)**

## 9.2 Other information

- No information available

---

**SECTION 10: Stability and reactivity**

## 10.1 Reactivity

- Reacts with acids liberating toxic gas (chlorine)

## 10.2 Chemical stability

- Avoid overheating

## 10.3 Possibility of hazardous reactions

- Contact with acids liberates toxic gas.
- Reacts with amines and ammonia to form explosive compounds
- Reacts strongly with sodium bisulfite
- Can react violently with methanol

## 10.4 Conditions to avoid

- Keep away from heat and direct sunlight.

## 10.5 Incompatible materials

- Incompatible with acid
- Incompatible with metals
- Incompatible with amines
- Incompatible with ammonia solution
- Decomposition with evolution of oxygen is accelerated by heat and light, and also by contact with metals, particularly copper, nickel, iron and monel.

## 10.6 Hazardous decomposition products

- Decomposition products include chlorine.

---

**SECTION 11: Toxicological information**

## 11.1 Information on toxicological effects

- Acute Toxicity

Based on available data, the classification criteria are not met

## Substances

Chemical Name	LD50 (oral, rat)	LC50 (inhalation, rat)	LD50 (dermal, rabbit)
Sodium hypochlorite	1 100 mg/kg	No data available	20 000 mg/kg
Sodium hydroxide	No data available	No data available	No data available

- Skin corrosion/irritation  
Causes severe skin burns.  
Classification based on calculation and concentration thresholds
- Serious eye damage/irritation  
Causes serious eye damage.  
Classification based on calculation and concentration thresholds
- Respiratory or skin sensitisation  
Based on available data, the classification criteria are not met

Revision: 1 September 2020

---

**SECTION 11: Toxicological information (....)**

- Germ cell mutagenicity  
No evidence of mutagenic effects
- Carcinogenicity  
No evidence of carcinogenic effects
- Reproductive toxicity  
No evidence of reproductive effects
- Specific target organ toxicity (STOT) - single exposure  
Based on available data, the classification criteria are not met
- Specific target organ toxicity (STOT) - repeated exposure  
Based on available data, the classification criteria are not met

## Substances

Chemical Name	NOAEL (oral, rat)
Sodium hypochlorite	50 mg/kg bw/day

- Aspiration hazard  
Based on available data, the classification criteria are not met
- Contact with eyes  
May cause redness and swelling  
May cause severe damage with formation of corneal ulcers and permanent impairment of vision.
- Contact with skin  
May cause severe burns with permanent skin damage which are slow to heal.  
Possible blistering of the skin of affected areas
- Ingestion  
May cause burns to mouth and throat  
May cause damage to the stomach lining  
The ingestion of significant quantities may cause nausea/vomiting  
May cause stomach pain
- Inhalation  
May cause respiratory tract irritation.  
May cause coughing and tightness of chest  
May cause breathing difficulty  
May cause shortness of breath

---

**SECTION 12: Ecological information**

## 12.1 Toxicity

- Very toxic to aquatic life.
- Toxic to aquatic life with long lasting effects.
- Classification based on calculation and concentration thresholds
- Sodium hypochlorite  
LC50 (fish) 50 µg/l (5 days)  
EC50 (aquatic invertebrates) 26 - 141 µg/l (48 hr)  
EC50 (aquatic algae) 18.3 - 36.5 µg/l (72 hr)
- Sodium Hydroxide  
EC50 (aquatic invertebrates) 40.4 mg/l (48 hr)

## 12.2 Persistence and degradability

- Will degrade

## 12.3 Bioaccumulative potential



Revision: 1 September 2020

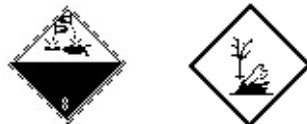
---

**SECTION 12: Ecological information (....)**

- Bioaccumulation is not expected
- 12.4 Mobility in soil
- Large volumes may penetrate soil and contaminate groundwater
- 12.5 Results of PBT and vPvB assessment
- Not a PBT according to REACH Annex XIII
  - Not a vPvB according to REACH Annex XIII
- 12.6 Other adverse effects
- May cause adverse effects in the aquatic environment due to high pH
- 

**SECTION 13: Disposal considerations**

- 13.1 Waste treatment methods
- Disposal should be in accordance with local, state or national legislation
  - Do not discharge into drains or the environment, dispose to an authorised waste collection point
  - This material and its container must be disposed of as hazardous waste
  - Do not reuse empty containers without commercial cleaning or reconditioning
  - Contaminated water can be neutralised with a sodium thiosulphate solution
- 13.2 Classification
- The waste must be identified according to the List of Wastes (2000/532/EC)
  - Hazardous Property Code(s): HP 8 Corrosive; HP 14 Ecotoxic
- 

**SECTION 14: Transport information**

- 14.1 UN number
- UN No.: 1791
- 14.2 UN proper shipping name
- Proper Shipping Name: HYPOCHLORITE SOLUTION
- 14.3 Transport hazard class(es)
- Hazard Class: 8
- 14.4 Packing group
- Packing Group: II
- 14.5 Environmental hazards
- Marine pollutant
- 14.6 Special precautions for user
- No information available
- 14.7 Transport in bulk according to Annex II of Marpol and the IBC Code
- Not applicable
- 14.8 Road/Rail (ADR/RID)
- Proper Shipping Name: HYPOCHLORITE SOLUTION
  - ADR UN No.: 1791
-

Revision: 1 September 2020

---

**SECTION 14: Transport information (....)**

- ADR Hazard Class: 8
- ADR Packing Group: II
- Tunnel Code: E

**14.9 Sea (IMDG)**

- Proper Shipping Name: HYPOCHLORITE SOLUTION
- IMDG UN No.: 1791
- IMDG Hazard Class: 8
- IMDG Pack Group.: II

**14.10 Air (ICAO/IATA)**

- Proper Shipping Name: HYPOCHLORITE SOLUTION
- ICAO UN No.: 1791
- ICAO Hazard Class: 8
- ICAO Packing Group: II

---

**SECTION 15: Regulatory information****15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**

- This safety data sheet is provided in compliance with REACH Regulation (EC) No 1907/2006 as amended by Regulation (EU) 2015/830
- Regulation (EC) No. 1272/2008 on the classification, labelling and packaging of substances and mixtures (CLP Regulation) applies in Europe
- This product is covered by the EU Biocides Regulation 528/2012 (EU BPR)

**15.2 Chemical safety assessment**

- A REACH chemical safety assessment has been carried out

---

**SECTION 16: Other information**

The statements made herein are based on our best present experience and are intended to describe product safety requirements. They should not therefore be considered as a warranty of specific properties.

Sources of data: Information from published literature and supplier safety data sheets

Revision No. 2.0.0. Revised September 2020.

Changes made: Revisions to all sections to conform to Regulation (EU) 2015/830.

Text not given with phrase codes where they are used elsewhere in this safety data sheet:

- H290: May be corrosive to metals
- H314: Causes severe skin burns and eye damage
- H318: Causes serious eye damage
- 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
- EUH031: Contact with acids liberates toxic gas
- EUH206: Warning! Do not use together with other products. May release dangerous gases (chlorine).

**Acronyms**

- ATE: Acute Toxicity Estimate
- CAS: Chemical Abstracts Service
- DNEL: Derived No-Effect Level
- EC: European Community
- EC50: Effective Concentration, 50%



Revision: 1 September 2020

---

**SECTION 16: Other information (....)**

- GHS: Globally Harmonised System
- LC50: Lethal Concentration, 50%
- LD50: Lethal Dose, 50%
- NOAEC: No observed adverse effect concentration
- NOAEL: No observed adverse effect level
- OEL: Occupational Exposure Limit
- PBT: Persistent, Bioaccumulative and Toxic
- PNEC: Predicted No-Effect Concentration
- REACH: Registration, Evaluation, Authorisation and Restriction of Chemicals
- SCL: Specific Concentration Limit
- vPvB: very Persistent and very Bioaccumulative
- WEL: Workplace Exposure Limit

--- end of safety datasheet ---

---