
SAFETY DATA SHEET

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

1.1 Product identifier

- Datasheet Number: Solution A Version 3.0.0
- Product Name: Solution A

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

- Use of the substance/mixture: Test reagent
- 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]: Aquatic Chronic 3, H412
- Additional information: For full text of Hazard- and EU Hazard-statements: see section 16

2.2 Label elements

- Hazard pictograms: None
- Signal Word: None
- Hazard statements
H412 - Harmful to aquatic life with long lasting effects.
- Precautionary statements
P273 - Avoid release to the environment.
P501 - Dispose of contents/container to an authorised waste collection point
- Supplemental Hazard information (EU)
EUH206 - Warning! Do not use together with other products. May release dangerous gases (chlorine).

2.3 Other hazards

- May cause irritation to skin, eyes and the respiratory tract.
 - Not a PBT according to REACH Annex XIII
 - Not a vPvB according to REACH Annex XIII
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SECTION 3: Composition/information on ingredients

3.1 Substances

- Not applicable
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SECTION 3: Composition/information on ingredients (....)

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	< 1%	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	None
Sodium hydroxide; Caustic soda	< 0.5%	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.
 - If eye irritation persists: Get 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
 - If skin irritation occurs: Get medical advice/attention.
- Ingestion
 - Rinse mouth with water (do not swallow)
 - Give plenty of water to drink
 - Do NOT induce vomiting.
 - Get 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
 - May cause redness and irritation
- Contact with skin
 - May cause redness and irritation

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

- Ingestion
 - May cause nausea/vomiting
 - May cause stomach pain
- Inhalation
 - May cause respiratory tract irritation.

4.3 Indication of any immediate medical attention and special treatment needed

- Treat symptomatically
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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
 - 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
- Personal precautions for non-emergency personnel: Avoid breathing vapours, mist or gas; Do not get in eyes, on skin, or on clothing; 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; PVC or 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
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SECTION 6: Accidental release measures (....)

- 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

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 an area equipped with impermeable flooring.
- Protect from sunlight.
- Keep away from heat
- Incompatible with metals
- Incompatible with acid
- Keep away from: acids, ammonia solutions, amines and methanol
- Keep away from food, drink and animal feedingstuffs

7.3 Specific end use(s)

- Test reagent
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SECTION 8: Exposure controls/personal protection

8.1 Control parameters

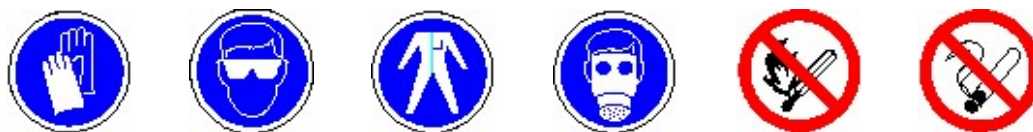
- If this product contains ingredients with exposure limits, personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment.
Reference should be made to monitoring 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/m³
WEL (short term limit value) 0.5 ppm 1.5 mg/m³ (UK)
-

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

- Sodium hypochlorite
 - DNEL (inhalational) 1.55 mg/m³ Industry, Long Term, Systemic Effects
 - DNEL (inhalational) 3.1 mg/m³ Industry, Acute/Short Term, Systemic Effects
 - DNEL (inhalational) 1.55 mg/m³ Industry, Long Term, Local Effects
 - DNEL (inhalational) 3.1 mg/m³ Industry, Acute/Short Term, Local Effects
 - DNEL (inhalational) 1.55 mg/m³ Consumer, Long Term, Systemic Effects
 - DNEL (inhalational) 3.1 mg/m³ Consumer, Acute/Short Term, Systemic Effects
 - DNEL (inhalational) 1.55 mg/m³ Consumer, Long Term, Local Effects
 - DNEL (inhalational) 3.1 mg/m³ 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/m³ (UK)
 - DNEL (inhalational) 1 mg/m³ Industry, Long Term, Local Effects
 - DNEL (inhalational) 1 mg/m³ 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
 - If practicable, engineering controls should be provided where airborne concentrations exceed exposure limits
- 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
 - 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 safety glasses approved to standard EN 166.
 - When handling this substance, e.g. diluting, wear goggles giving complete eye protection
- 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
- Hygiene measures
 - Do not eat, drink or smoke when using this product.
 - Use good personal hygiene practices
 - Wash thoroughly after handling.
 - Contaminated clothing should be laundered before reuse
 - 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 8: Exposure controls/personal protection (....)


SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

- Appearance: Clear and colourless liquid
- Odour: Smells of chlorine
- Odour threshold: No information available
- pH: ~ 11
- Melting point/freezing point: ~ 0 °C
- Initial boiling point and boiling range: ~ 100 °C
- Flashpoint: Not applicable
- Evaporation Rate: No information available
- Flammability (solid,gas): Not flammable
- Upper/lower flammability or explosive limits: Not applicable
- Vapour Pressure: 23 hPa
- Vapour Density: Not applicable
- Relative Density: ~ 1.01
- Solubility(ies): Soluble in water
- 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

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

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SECTION 10: Stability and reactivity (....)

- 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
Based on available data, the classification criteria are not met
- Serious eye damage/irritation
Based on available data, the classification criteria are not met
- Respiratory or skin sensitisation
Based on available data, the classification criteria are not met
- 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 irritation
 - Contact with skin
May cause redness and irritation
 - Ingestion
The ingestion of significant quantities may cause nausea/vomiting
May cause stomach pain
-



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SECTION 11: Toxicological information (....)

- Inhalation
May cause respiratory tract irritation.

SECTION 12: Ecological information

12.1 Toxicity

- Harmful 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

- 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

13.2 Classification

- The waste must be identified according to the List of Wastes (2000/532/EC)
- Hazardous Property Code(s): HP 14 Ecotoxic

SECTION 14: Transport information

Not classified as hazardous for transport

14.1 UN number

- UN No.: Not applicable

14.2 UN proper shipping name

- Proper Shipping Name: Not applicable

SECTION 14: Transport information (....)

14.3 Transport hazard class(es)

- Hazard Class: Not applicable

14.4 Packing group

- Packing Group: Not applicable

14.5 Environmental hazards

- Not Classified

14.6 Special precautions for user

- Not Classified

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: Not applicable
- ADR UN No.: Not applicable
- ADR Hazard Class: Not applicable
- ADR Packing Group: Not applicable
- Tunnel Code: Not applicable

14.9 Sea (IMDG)

- Proper Shipping Name: Not applicable
- IMDG UN No.: Not applicable
- IMDG Hazard Class: Not applicable
- IMDG Pack Group.: Not applicable

14.10 Air (ICAO/IATA)

- Proper Shipping Name: Not applicable
- ICAO UN No.: Not applicable
- ICAO Hazard Class: Not applicable
- ICAO Packing Group: Not applicable

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

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 January 2015.

Changes made: Amendments to ingredients in sub-section 3.2 and other minor amendments.

Revision No. 3.0.0. Revised October 2020.

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



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SECTION 16: Other information (....)

Classification and procedure used to derive the classification for mixtures according to Regulation (EC) 1272/2008 [CLP]:

- Aquatic Chronic 3, H412: Classification based on calculation and concentration thresholds

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%
- 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 ---
