

1. Identification of the substance/preparation and of the company/undertaking

1.1 Product Identifier

Trade Name: Caustic Soda $\geq 2\%$ - $\leq 50\%$
 Substance name: Sodium hydroxide

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

Uses: Increase pH
 Restrictions: At this moment we have not identified any uses advised against

1.3 Details of the supplier of the safety data sheet

Company: Complete Pool Controls Ltd
 Unit 2, The Park
 Stoke Orchard
 Bishops Cleeve
 Gloucestershire
 GL52 7RS

Telephone: +44 (0) 8712 229081 Fax: +44 (0) 8712 229083
 E-mail: sales@cpc-chemicals.co.uk

1.4 Emergency Telephone

Tel: +44 (0) 8712 229081 (office hours) +44 (0) 1242 300271 (outside of office hours)

2. Hazard Identification

2.1 Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008

Hazard Class	Hazard Category	Hazard Statements
Corrosive to Metals	Category 1	H290
Skin Corrosion	Category 1A	H314

For the full text of the H statements mentioned in this section see Section 16.

Most important adverse effects

Human Health: See section 11 for toxicological information
 Physical & Chemical Hazards: See section 9 for physicochemical information
 Potential environmental effects: See section 12 for environmental information

2.2 Label elements

Labelling according to Regulation (EC) No 1272/2008

Hazard symbols:



Signal word: Danger

Hazard statements: H290 May be corrosive to metals
 H314 Causes severe skin burns and eye damage

Precautionary statements: P280: Wear protective gloves/protective clothing/eye protection/face protection
 P301+P361+P353: IF SWALLOWED: rinse mouth. Do NOT induce vomiting.
 P303+361+353: IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water
 P305+351+338: IF IN EYES: Rinse continuously with water for several minutes. Remove contact lenses if present and easy to do – continue rinsing
 P308+310: If exposed or concerned: Immediately call a POISON CENTRE or doctor/physician

Trade Name: Caustic Soda (Liquid) $\geq 2\%$ - $\leq 50\%$

2. Hazard Identification

Hazardous components which must be listed on the label

Sodium hydroxide

2.3 Other Hazards

For Results of PBT and vPvB assessment see section 12.5.

3. Composition/information on ingredients

3.1 Substances

Chemical nature: **Aqueous solution**

Hazardous components

sodium hydroxid

Index-No.	CAS-No.	EC-No.	Registration	Amount [%]	Hazard statements
011-002-00-6	1310-73-2	215-185-5	01-2119457892-27-xxxx	≥ 5 - ≤ 50	Met. Corr.1 :H290

4. First Aid measures

- 4.1 General Advice:** Take off all contaminated clothing immediately.
- If Inhaled:** In case of accident by inhalation; remove casualty to fresh air and keep at rest. If breathing is irregular or stopped, administer artificial respiration. Call a physician immediately
- In case of skin contact:** Wash off immediately with plenty of soap & water. Immediate medical treatment is necessary as untreated wounds from corrosion of the skin heal slowly and with difficulty.
- In case of eye contact:** Rinse immediately with plenty of water, also under eyelids for at least 15 minutes. Remove contact lenses. Consult an eye specialist immediately. Go to an ophthalmic hospital if possible.
- If swallowed:** Never give anything by mouth to an unconscious person. Do NOT induce vomiting. Call a physician immediately. Rinse mouth with water.
- 4.2 Most important symptoms and effects, both acute and delayed**
- Symptoms:** See section 11 for more detailed information on health effects and symptoms
- Effects:** See section 11 for more detailed information on health effects and symptoms
- 4.3 Indication of immediate medical attention and special treatment needed**
- Treatment** Treat symptomatically. No further information available

5. Fire fighting measures

5.1 Extinguishing media:

Suitable media: Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Unsuitable media: High powered water jet

5.2 Special hazards arising from the substance or mixture

Specific Hazards during fire: Incomplete combustion may form toxic pyrolysis products.

Haz. combustion products: Carbon monoxide, Carbon dioxide (CO₂), The formation of caustic fumes is possible.

5.3 Advice for fire-fighters

Special protective equipment: In the event of fire, wear self-contained breathing apparatus. Wear appropriate body protection (full protective suit)

Extinguishing methods: Control smoke with water spray.

Further Information: Collect contaminated fire extinguishing water separately. This must not be discharged into drains.

6. Accidental release Measures

6.1 Personal precautions, protective equipment and emergency procedures

Personal Precautions: Danger of slipping if spilled. Avoid contact with skin and eyes. Do not breathe vapours or spray mist.

6.2 Environmental precautions

Environmental precautions: Do not flush into surface water or sanitary sewer system. Avoid subsoil penetration. If the product contaminates rivers and lakes or drains inform respective authorities. If material reaches soil inform authorities responsible for such cases.

6.3 Methods and materials for containment and cleaning up

Clean-up procedures: Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders) Keep in suitable closed containers for disposal.

Further Information: Treat recovered material in the section 'Disposal considerations'

6.4 Reference to other sections

See Section 1 for emergency contact information
See Section 8 for personal protective information
See Section 13 for waste treatment information

7. Handling and storage

7.1 Precautions for safe handling

Advice on safe handling: Keep container tightly closed. Use personal protective equipment. Provide sufficient air exchange and/or exhaust in work rooms. Avoid formation of aerosol. In case of mist, spray or aerosol exposure wear suitable personal respiratory protection and protective suit. Avoid contact with skin and eyes. Avoid inhalation of vapour or mist. emergency eye wash fountains and emergency showers should be available in the immediate vicinity.

Hygiene measures: Keep away from food, drink and animal feeding stuffs. Smoking, eating and drinking should be prohibited in the application area. Wash hands before breaks and at the end of the work day. Take off all contaminated clothing immediately. Provide adequate ventilation. Avoid contact with the skin and eyes.

7.2 Conditions for safe storage, including any incompatibilities.

Storage conditions: Store in original container.

Protection against fire and explosion: Normal measures for preventive fire protection.

Further information: Keep tightly closed in a dry and cool place. Keep in a well-ventilated place.

Common storage: Keep away from food, drink and animal feeding stuffs. Acids, Light metals

Suitable packaging materials: Stainless steel, Polyethylene, Polypropylene, Polyvinylchloride

Unsuitable packaging materials: Aluminium, Zinc, Copper

7.3 Specific end uses

Specific use(s): No information available

8. Exposure control/personal protection**8.1 Control parameters**

SODIUM HYDROXIDE

Derived No Effect Level (DNEL) / Derived Minimal Effect Level (DMEL)		
DNEL	Workers, Long-term - local effects, Inhalation	1.0 mg/m ³
DNEL	Workers, Long-term - local effects, Inhalation	1.0 mg/m ³

STATE	15 min.STEL
EH40 WEL	2 mg/m ³
ELV (IE)	2 mg/m ³

8.2 Exposure controls**Engineering measures**

Refer to protective measures listed in sections 7 and 8

Personal protective equipment

Respiratory protection In case of brief exposure or low pollution use breathing filter apparatus.
Respiratory protection complying with EN 141. In case of intensive or longer exposure use self-contained breathing apparatus.

Hand protection product. Take note of the information given by the producer concerning permeability and break through times, and of special workplace conditions (mechanical strain, duration of contact).
Protective gloves should be replaced at first sign of wear.

Material	Gloves	Glove Thickness
Natural Rubber	>= 8 h	0.5mm
Polychloropene	>= 8 h	0.5mm
Nitrile rubber	>= 8 h	0.35 mm
butyl rubber	>= 8 h	0.5mm
Fluorinated rubber	>= 8 h	0.4mm
Polyvinylchloride	>= 8 h	0.5mm

Eye protection Tightly fitted safety goggles: Face shield

Skin and body protection: Impervious clothing: Chemical resistant apron

Environmental exposure controls

General advice: Do not flush into surface water or sanitary sewer systems
Avoid subsoil penetration
If the product contaminates rivers and lakes or drains inform respective authorities.
If the product reaches soil inform respective authorities.

9. Physical and chemical properties**9.1 Information on basic physical and chemical properties**

Form: Liquid
Colour: Colourless
Odour: Odourless
Odour Threshold: Not applicable
pH @ 20°C: Not applicable
melting point: -17 °C 10% solution
12 °C 50% solution

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9. Physical and chemical properties continued

Boiling point:	105 °C 10% solution 145 °C 50% solution
Flash point:	Not applicable
Evaporation rate:	Not applicable
Flammability (solid, gas)	Not applicable
Upper explosion limit:	Not applicable
Lower explosion limit:	Not applicable
Vapour pressure:	21 hPa (20 °C) 12% solution
Relative vapour density:	No data available
Density @ 20°C:	ca. 1.0538 g/cm ³ (20 °C) 5% solution ca. 1.175 g/cm ³ (20 °C) 15% solution ca. 1.274 g/cm ³ (20 °C) 25% solution ca. 1.34 g/cm ³ (20 °C) 30% solution ca. 1.38 g/cm ³ (20 °C) 35% solution ca. 1.48 g/cm ³ (20 °C) 45% solution ca. 1.525 g/cm ³ (20 °C) 50% solution ca. 1.2191 g/cm ³ (20 °C) 20% solution
Water solubility:	1090 g/l (20 °C)
Partition coefficient:n-octanol/water:	No data available
Ignition temperature:	No data available
Thermal decomposition:	No data available
Viscosity, kinematic:	79 mPa.s (20 °C)
Explosive properties:	Product is not explosive
Oxidising properties:	No data available

9.2 Other Information

Corrosion to metals:	Corrosive to metals
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10. Stability and reactivity**10.1 Reactivity**

Reactivity	No decomposition if stored and applied as directed.
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10.2 Chemical stability

Chemical stability	Stable under recommended storage conditions.
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10.3 Possibility of hazardous reactions

Hazardous reactions:	Corrosive in contact with metals Gives off hydrogen by reaction with base metals (zinc, aluminium). Reacts exothermically with water. Reacts exothermic with acids.
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10.4 Conditions to avoid

Conditions to avoid	Heat, flames and sparks.
Thermal decomposition	no data available

10.5 Incompatible materials

Materials to avoid	Materials to avoid: Acids, Light metals, Alcohols, Halogenated hydrocarbon
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10.6 Hazardous decomposition products

Haz. decomp products:	hydrogen
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11. Toxicological Information**11.1 Information on toxicological effects****Acute Toxicity**

Oral	Please find this information in the listing of the component/components below in this section.
Inhalation	No valid data available
Dermal	No valid data available

Irritation

Skin	Causes severe skin burns and eye damage.
Eyes	Causes eye burns.

Sensitisation

No data available

CMR Properties

Carcinogenicity	No data available
Mutagenicity	No data available
Reproductive toxicity	No data available

Specific Target Organ Toxicity

Single exposure	No data available
Repeated exposure	No data available

Other toxic properties

Repeated dose toxicity	No data available
Aspiration hazard	No data available

Component: sodium hydroxide**CAS-No. 1310-73-2****Acute Toxicity**

Oral	No valid data available
Inhalation	No valid data available
Dermal	No valid data available

Irritation

Skin	Very corrosive (Rabbit) (No guideline followed)
Eyes	Irritating to eyes. (Rabbit) (OECD Test Guideline 405)

Sensitisation

not sensitizing (human) (No guideline followed) Patch test on human volunteers did not demonstrate sensitisation properties.

CMR Properties

Carcinogenicity	No experimental references for cancerogenity available.
Mutagenicity	In vitro tests did not show mutagenic effects. In vivo tests did not show mutagenic effects
Teratogenicity	No data available
Reproductive toxicity	Not expected to impair fertility

Specific Target Organ Toxicity

Single exposure	The substance or mixture is not classified as specific target organ toxicant, single exposure.
Repeated exposure	The substance or mixture is not classified as specific target organ toxicant, repeated exposure.

Other toxic properties

Aspiration hazard	Not applicable
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Trade Name: Caustic Soda (Liquid) >=2% - <=50%

12. Ecological Information

12.1 Toxicity

Acute aquatic toxicity The product is not classified as dangerous for the environment.

Acute toxicity

Component: sodium hydroxide			CAS-No. 1310-73-2		
	Species			Test	
Fish	Gambusia affinis		LC50	96h	125 mg/l
Fish	Poecilia reticulata		LC50	24h	145 mg/l
Daphnia	(Ceriodaphnia (water flea);		EC50	48h	40.4mg/l
Bacteria	Photobacterium phosphoreum		EC50	15 min	22 mg/l

(No guideline followed)

(No guideline followed)

(No guideline followed)

(EPS 1/RM/24)

12.2 Persistence and degradability

Persistence and degradability The methods for determining biogradability are not applicable to inorganic substances.

12.3 Bioaccumulative potential

Bioaccumulative potential Does not bioaccumulate

12.4 Mobility in soil

Mobility in soil The product is mobile in water environment

12.5 Results of PBT and PvB assessment

PBT and PvB

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

12.6 Other adverse effects

Remarks: Do not flush into surface water or sanitary sewer system. Avoid subsoil penetration.
Harmful effects to aquatic organisms due to pH-shift.

Component: sodium hydroxide	CAS-No. 1310-73-2
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Remarks: Harmful effects to aquatic organisms due to pH-shift.
Neutralization is normally necessary before waste water is discharged into water treatment plants.
Do not flush into surface water or sanitary sewer system.

13. Disposal Considerations

13.1 Waste treatment methods

Product: Disposal together with normal waste is not allowed. Special disposal required according to local regulations. Do not let product enter drains. Contact waste disposal services.

Contaminated packaging: Dispose of contaminated packaging in the same way as the product. In accordance with local and national regulations. Empty containers retain residue and can be dangerous.

European Waste Catalogue No: No waste code according to the European Waste Catalogue can be assigned for this product, as the intended use dictates the assignment. The waste code is established in consultation with the regional waste disposer.

Trade Name: Caustic Soda (Liquid) >=2% - <=50%

14. Transport Information

14.1 UN Number	1824
14.2 UN proper shipping name ADR / RID / IMDG:	SODIUM HYDROXIDE SOLUTION
14.3 Transport hazard class(es) ADR Class (Label, classification code; Hazard ID; Tunnel Restriction code)	8 8;C5;80; (E)
RID Class (Label, Classification Code; Hazard ID;)	8 8;C5;80;
IMDG Class (Labels; EmS)	8 8, F-A,S-B
14.4 Packaging Group ADR / RID / IMDG:	II
14.5 Environmental hazards Labelling according to 5.2.1.8 ADR/RID/IMDG:	No
Environmentally hazardous according to ADR/RID	No
Marine Pollutant according to IMDG-Code	No
14.6 Special precautions for user	Not applicable
14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code IMDG:	Not applicable

15. Regulatory information

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

EU. REACH, Annex XVII, Marketing and Use Restrictions (Regulation 1907/2006/EC):	Point Nos.: , 3; Listed
EU. Directive 2012/18/EU (SEVESO III) Annex I	The substance/mixture does not fall under this legislation
Component: sodium hydroxide CAS-No. 1310-73-2	
EU. Regulation EU No. 649/2012 concerning the export and import of dangerous chemicals:	The substance/mixture does not fall under this legislation
EU. REACH, Annex XVII, Marketing and Use Restrictions (Regulation 1907/2006/EC):	The substance/mixture does not fall under this legislation
EU. Regulation No 1451/2007 [Biocides], Annex I, OJ (L 325)	EC Number: , 215-185-5; Listed
EU. Regulation No. 1223/2009 on cosmetic products, Annex III: List of Restricted Substances in Cosmetic Products:	Maximum concentration in ready for use preparation: 2 %; Hair straightener: General use; See the text of the regulation for applicable exceptions or provisions.

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15. Regulatory information**15.1 Safety, health and environmental regulations/legislation specific for this substance or mixture.****Component: sodium hydroxide****CAS-No. 1310-73-2**EU. Regulation No. 1223/2009 on cosmetic products, Annex III:
List of Restricted Substances in Cosmetic Products:

pH < 12,7.; pH adjuster for depilatories; See the text of the regulation for applicable exceptions or provisions.
Maximum concentration in ready for use preparation: 4.5 %; Hair straightener: Professional use; See the text of the regulation for applicable exceptions or provisions.
pH < 11.; Uses as pH adjuster other than for depilatories; See the text of the regulation for applicable exceptions or provisions.
Maximum concentration in ready for use preparation: 5 %; Nail cuticle solvent; See the text of the regulation for applicable exceptions or provisions.

EU. Directive 2012/18/EU (SEVESO III) Annex I:

The substance/mixture does not fall under this legislation

WGK (DE):

WGK 1: slightly water endangering: 142; Classification source is Annex 2.

Component: sodium hypochlorite, solution**CAS-No. 7681-52-9**

Notification status

sodium hypochlorite, solution:

Regulatory List	Notification	Notification number
AICS	Yes	
DSL	Yes	
EINECS	Yes	231-668-3
ENCS (JP)	Yes	(1)-237
IECSC	Yes	
ISHL (JP)	Yes	(1)-237
KECI (KR)	Yes	KE-31506
NZIOC	Yes	HSR003698
PICCS (PH)	Yes	
TSCA	Yes	

15.2 Chemical Safety Assessment

Safety Assessment No data available

16. Other information

Full text of H-statements referred to under sections 2 and 3

H290 May be corrosive to metals

H314 Causes severe skin burns and eye damage

Further information

Key literature references and sources for data:

Supplier information and data from the "Database of registered substances" of the European Chemicals Agency (ECHA) were used to create this safety data sheet.

Methods used for product classification :

The classification for human health, physical and chemical hazards and environmental hazards were derived from a combination of calculation methods and if available test data.

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Trade Name: Caustic Soda (Liquid) $\geq 2\%$ - $\leq 50\%$

16. Other information

Hints for training:

The workers have to be trained regularly on the safe handling of the products based on the information provided in the Safety Data Sheet and the local conditions of the workplace. National regulations for the training of workers in the handling of hazardous materials must be adhered to.

This information is believed to be accurate and represents the best information currently available to us. However, we make no warranty or merchantability, or fitness for any particular use, or any other warranty, express or implied, with respect to this information, and we assume no liability resulting from use of this information. Users should make their own investigations to determine the suitability of the information for their particular needs and uses.

Rev 5

■ Indicates updated section.