



**SAFETY DATA SHEET**  
SODIUM HYDROXIDE 50% SOLUTION

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Compilation date: 30/10/2014

Revision date: 15/05/2015

Revision No: 2

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

**1.1. Product identifier**

**Product name:** SODIUM HYDROXIDE 50% SOLUTION

**CAS number:** 1310-73-2

**EINECS number:** 215-185-5

**Index number:** 011-002-00-6

**Product code:** GPC2003

**Synonyms:** CAUSTIC SODA 50%

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

**Use of substance / mixture:** Laboratory chemicals. Manufacture of substances.

**1.3. Details of the supplier of the safety data sheet**

**Company name:** Atom Scientific Ltd  
Unit 2B East Tame Business Park  
Rexcine Way  
Hyde  
Cheshire  
SK14 4GX  
United Kingdom

**Tel:** +44 161 366 5123

**Fax:** +44 170 433 7167

**Email:** technical@atomscientific.com

**1.4. Emergency telephone number**

**Emergency tel:** +44 161 366 5123

(office hours only)

**Section 2: Hazards identification**

**2.1. Classification of the substance or mixture**

**Classification under CLP:** Skin Corr. 1A: H314; Met. Corr. 1: H290

**Classification under CHIP:** This product has no classification under CHIP.

**2.2. Label elements**

**Label elements under CLP:**

**Hazard statements:** H314: Causes severe skin burns and eye damage.

H290: May be corrosive to metals.

**Signal words:** Danger

[cont...]

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**Hazard pictograms:** GHS05: Corrosion



**Precautionary statements:** P102: Keep out of reach of children.  
P264: Wash hands thoroughly after handling.  
P280: Wear protective gloves/protective clothing/eye protection/face protection.  
P305+351+338: 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 or doctor.  
P405: Store locked up.

**2.3. Other hazards**

**PBT:** This product is not identified as a PBT/vPvB substance.

**Section 3: Composition/information on ingredients**

**3.2. Mixtures**

**Hazardous ingredients:**

SODIUM HYDROXIDE

EINECS	CAS	CHIP Classification	CLP Classification	Percent
215-185-5	1310-73-2	C: R35	Skin Corr. 1A: H314	30-50%

**Contains:** Formula: HNaO

**Section 4: First aid measures**

**4.1. Description of first aid measures**

**Skin contact:** Remove all contaminated clothes and footwear immediately unless stuck to skin. Drench the affected skin with running water for 10 minutes or longer if substance is still on skin. Transfer to hospital if there are burns or symptoms of poisoning.

**Eye contact:** Bathe the eye with running water for 15 minutes. Transfer to hospital for specialist examination.

**Ingestion:** Wash out mouth with water. Do not induce vomiting. Give 1 cup of water to drink every 10 minutes. If unconscious, check for breathing and apply artificial respiration if necessary. If unconscious and breathing is OK, place in the recovery position. Transfer to hospital as soon as possible.

**Inhalation:** Remove casualty from exposure ensuring one's own safety whilst doing so. If unconscious and breathing is OK, place in the recovery position. If conscious, ensure the casualty sits or lies down. If breathing becomes bubbly, have the casualty sit and provide oxygen if available. Transfer to hospital as soon as possible.

[cont...]

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

**Skin contact:** Blistering may occur. Progressive ulceration will occur if treatment is not immediate.

**Eye contact:** Corneal burns may occur. May cause permanent damage.

**Ingestion:** Corrosive burns may appear around the lips. Blood may be vomited. There may be bleeding from the mouth or nose.

**Inhalation:** There may be shortness of breath with a burning sensation in the throat. Exposure may cause coughing or wheezing.

**Delayed / immediate effects:** Immediate effects can be expected after short-term exposure.

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

**Immediate / special treatment:** Eye bathing equipment should be available on the premises.

**Section 5: Fire-fighting measures**

**5.1. Extinguishing media**

**Extinguishing media:** Suitable extinguishing media for the surrounding fire should be used. Use water spray to cool containers.

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

**Exposure hazards:** Corrosive. In combustion emits toxic fumes.

**5.3. Advice for fire-fighters**

**Advice for fire-fighters:** Wear self-contained breathing apparatus. Wear protective clothing to prevent contact with skin and eyes.

**Section 6: Accidental release measures**

**6.1. Personal precautions, protective equipment and emergency procedures**

**Personal precautions:** Notify the police and fire brigade immediately. If outside keep bystanders upwind and away from danger point. Mark out the contaminated area with signs and prevent access to unauthorised personnel. Do not attempt to take action without suitable protective clothing - see section 8 of SDS. Turn leaking containers leak-side up to prevent the escape of liquid.

**6.2. Environmental precautions**

**Environmental precautions:** Do not discharge into drains or rivers. Contain the spillage using bunding.

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

**Clean-up procedures:** Clean-up should be dealt with only by qualified personnel familiar with the specific substance. Absorb into dry earth or sand. Transfer to a closable, labelled salvage container for disposal by an appropriate method.

**6.4. Reference to other sections**

**Reference to other sections:** Refer to section 8 of SDS.

[cont...]

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**Section 7: Handling and storage**

**7.1. Precautions for safe handling**

**Handling requirements:** Avoid direct contact with the substance. Ensure there is sufficient ventilation of the area.  
Do not handle in a confined space. Avoid the formation or spread of mists in the air.

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

**Storage conditions:** Store in cool, well ventilated area. Keep container tightly closed. Containers which are opened must be carefully resealed and kept upright to prevent leakage. Storage class (TRGS 510): Non-combustible, corrosive hazardous material.

**7.3. Specific end use(s)**

**Specific end use(s):** No other specific uses stipulated other than the uses mentioned in section 1.2.

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

**8.1. Control parameters**

**Workplace exposure limits:**

**Respirable dust**

State	8 hour TWA	15 min. STEL	8 hour TWA	15 min. STEL
UK	-	2mg/m3	-	-

**Hazardous ingredients:**

**SODIUM HYDROXIDE**

**Workplace exposure limits:**

**Respirable dust**

State	8 hour TWA	15 min. STEL	8 hour TWA	15 min. STEL
UK	-	2 mg/m3	-	-

**8.1. DNEL/PNEC Values**

**DNEL / PNEC** No data available.

**8.2. Exposure controls**

**Engineering measures:** Handle in accordance with good industrial hygiene and safety practise. Wash hands before breaks and at the end of the workday.

**Respiratory protection:** Where risk assessment shows air-purifying respirators are appropriate use a full-face respirator with multi-purpose combination (US) or type ABEK (EN 14387) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

**Hand protection:** Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product.

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Dispose of contaminated gloves after use in accordance with application laws and good laboratory practises. Wash and dry hands. The selected protective gloves have to satisfy the specifications of EU Directive 89/686/EEC and the standard EN 374 derived from it. Full contact - Material: Nitrile rubber. Minimum layer thickness: 0.11 mm. Break through time: 8 hrs. Splash contact - Material: Nitrile rubber. Minimum layer thickness: 0.11 mm. Break through time: 8hrs.

**Eye protection:** Tightly fitting safety goggles. Faceshield (8-inch minimum). Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166 (EU).

**Skin protection:** Complete suit protecting against chemicals. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

**Environmental:** Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.

## Section 9: Physical and chemical properties

### 9.1. Information on basic physical and chemical properties

**State:** Liquid

**Colour:** Colourless

**Solubility in water:** Completely miscible, soluble.

**Boiling point/range °C:** 105-140

**Melting point/range °C:** -12 - 10

**Vapour pressure:** < 24 hPa at 20C

**Relative density:** 1.515

**pH:** 14

### 9.2. Other information

**Other information:** Relative vapour density - 1.38 (Air = 1.0)

## Section 10: Stability and reactivity

### 10.1. Reactivity

**Reactivity:** Stable under recommended transport or storage conditions.

### 10.2. Chemical stability

**Chemical stability:** Stable under normal conditions.

### 10.3. Possibility of hazardous reactions

**Hazardous reactions:** Hazardous reactions will not occur under normal transport or storage conditions. Decomposition may occur on exposure to conditions or materials listed below.

### 10.4. Conditions to avoid

**Conditions to avoid:** Heat.

[cont...]

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**10.5. Incompatible materials**

**Materials to avoid:** Water. Acids. Organic materials. Aluminium. Tin/Tin Oxides Phosphorus. Chlorinated solvents. Zinc.

**10.6. Hazardous decomposition products**

**Haz. decomp. products:** In combustion emits toxic fumes. In the event of fire: see section 5

**Section 11: Toxicological information**

**11.1. Information on toxicological effects**

**Hazardous ingredients:**

**SODIUM HYDROXIDE**

IPR	MUS	LD50	40	mg/kg
ORL	RBT	LDLO	500	mg/kg

**Toxicity values:** No data available.

**Symptoms / routes of exposure**

**Skin contact:** Blistering may occur. Progressive ulceration will occur if treatment is not immediate.

**Eye contact:** Corneal burns may occur. May cause permanent damage.

**Ingestion:** Corrosive burns may appear around the lips. Blood may be vomited. There may be bleeding from the mouth or nose.

**Inhalation:** There may be shortness of breath with a burning sensation in the throat. Exposure may cause coughing or wheezing.

**Delayed / immediate effects:** Immediate effects can be expected after short-term exposure.

**Other information:** RTECS: Not available. Burning sensation, cough, wheezing, laryngitis, shortness of breath, spasm, inflammation and edema of the larynx, spasm, inflammation and edema of the bronchi, pneumonitis, pulmonary edema. Material is extremely destructive to tissue of the mucous membrane and upper respiratory tract, eyes and skin.

**Section 12: Ecological information**

**12.1. Toxicity**

**Ecotoxicity values:** No data available.

**12.2. Persistence and degradability**

**Persistence and degradability:** Biodegradable.

**12.3. Bioaccumulative potential**

**Bioaccumulative potential:** No bioaccumulation potential.

**12.4. Mobility in soil**

**Mobility:** Readily absorbed into soil.

[cont...]

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**12.5. Results of PBT and vPvB assessment**

**PBT identification:** This product is not identified as a PBT/vPvB substance.

**12.6. Other adverse effects**

**Other adverse effects:** Negligible ecotoxicity.

**Section 13: Disposal considerations**

**13.1. Waste treatment methods**

**Disposal operations:** Transfer to a suitable container and arrange for collection by specialised disposal company. Offer surplus and non-recyclable solutions to a licensed disposal company.

**Disposal of packaging:** Dispose of as unused product.

**NB:** The user's attention is drawn to the possible existence of regional or national regulations regarding disposal.

**Section 14: Transport information**

**14.1. UN number**

**UN number:** UN1824

**14.2. UN proper shipping name**

**Shipping name:** SODIUM HYDROXIDE SOLUTION

**14.3. Transport hazard class(es)**

**Transport class:** 8

**14.4. Packing group**

**Packing group:** II

**14.5. Environmental hazards**

**Environmentally hazardous:** No

**Marine pollutant:** No

**14.6. Special precautions for user**

**Special precautions:** No special precautions.

**Tunnel code:** E

**Transport category:** 2

**Section 15: Regulatory information**

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

**Specific regulations:** This safety datasheet complies with the requirements of Regulation (EC) No. 1907/2006.

**15.2. Chemical Safety Assessment**

**Chemical safety assessment:** For this product a chemical safety assessment was not carried out.

[cont...]

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**Section 16: Other information**

**Other information**

**Other information:** This safety data sheet is prepared in accordance with Commission Regulation (EU) No 453/2010.

\* indicates text in the SDS which has changed since the last revision.

**Phrases used in s.2 and 3:** H290: May be corrosive to metals.

H314: Causes severe skin burns and eye damage.

R35: Causes severe burns.

**Legal disclaimer:** The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. This company shall not be held liable for any damage resulting from handling or from contact with the above product.