

# Material Safety Data Sheet (MSDS)

## Company Details:

### Company Name: Element Four Enterprise Pty Ltd

Address: Unit 21 Innovation Worx Leogem

88 Richards Drive Halfway House

Midrand 1685

South Africa

Telephone: +27 10 312 6773

Email: info@elementfour.co.za

## SECTION 1: CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Name: **Sodium Hydroxide Solution 0.1N (0.1M)**

Chemical Formula: NaOH

Common Names: Caustic Soda Solution, Lye Solution

## SECTION 2: HAZARDS IDENTIFICATION

### 2.1. GHS classification of the substance/mixture and any national or regional information

Classification according to the United Nations GHS

Not classified

### Adverse physicochemical, human health and environmental effects

To our knowledge, this product does not present any particular risk, provided it is handled in accordance with good occupational hygiene and safety practice

### 2.2. GHS label elements, including precautionary statements

#### Labelling according to the United Nations GHS

No labelling applicable

### 2.3. Other hazards which do not result in classification or are not covered by the GHS

No additional information available

## **SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS**

### **3.1. Substance**

Not applicable

### **3.2. Mixture**

This mixture does not contain any substances to be mentioned according to the applicable regulations

## **SECTION 4: FIRST AID MEASURES**

### **In case of Inhalation:**

Move to fresh air immediately. If breathing is difficult, give oxygen. Seek medical attention.

### **In case of Skin Contact:**

Rinse with water for at least 15 minutes. Remove contaminated clothing. Seek medical attention.

### **In case of Eye Contact:**

Rinse cautiously with water for at least 15 minutes. Remove contact lenses if present. Seek immediate medical attention.

### **In case of Ingestion:**

Do NOT induce vomiting. Rinse mouth and drink plenty of water. Seek medical attention immediately.

## **SECTION 5: FIRE-FIGHTING MEASURES**

**Extinguishing Media:** Use dry chemical, carbon dioxide, or sand. Do NOT use water directly on the product.

Hazardous Combustion Products: None under normal conditions.

**Special Precautions:** Wear full protective equipment and self-contained breathing apparatus (SCBA).

## **SECTION 6: ACCIDENTAL RELEASE MEASURES**

**Personal Precautions:** Wear protective equipment and avoid contact with skin, eyes, or clothing.

**Environmental Precautions:** Prevent entry into waterways, sewers, or soil.

Cleanup Methods: Neutralize with a weak acid (e.g., vinegar) and absorb with inert material (e.g., sand, vermiculite). Place in a sealed container for disposal.

## **SECTION 7: HANDLING AND STORAGE**

### **Handling:**

Avoid contact with skin, eyes, and clothing. Use in a well-ventilated area. Do not breathe mist or vapors.

### **Storage:**

Store in a cool, dry, well-ventilated area. Keep container tightly closed. Store away from acids and moisture.

## **SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION**

Engineering Controls: Use local exhaust ventilation or respiratory protection if mist or vapors are generated.

Personal Protective Equipment (PPE):

Gloves: Chemical-resistant gloves (e.g., nitrile, neoprene).

Eye Protection: Safety goggles or face shield.

Clothing: Lab coat or chemical-resistant apron.

Respiratory Protection: Use if ventilation is insufficient.

## **SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES**

Appearance: Clear, colorless liquid

Odor: Odorless

pH: Highly alkaline (14 in solution)

Boiling Point: Approximately 100°C (212°F) (water)

Freezing Point: Approximately 0°C (32°F) (water)

Solubility: Completely soluble in water

## **SECTION 10: STABILITY AND REACTIVITY**

Chemical Stability: Stable under recommended storage conditions.

Incompatible Materials: Reacts violently with acids, organic materials, and metals (e.g., aluminum, zinc).

Hazardous Decomposition Products: None under normal conditions.

## **SECTION 11: TOXICOLOGICAL INFORMATION**

Acute Toxicity: Corrosive to skin and eyes. Harmful if inhaled or ingested.

Chronic Effects: Prolonged exposure may cause respiratory irritation or skin sensitization.

## **SECTION 12: ECOLOGICAL INFORMATION**

Aquatic Toxicity: Highly toxic to aquatic organisms.

Persistence and Degradability: Not readily biodegradable.

Mobility in Soil: May migrate into groundwater.

## **SECTION 13: DISPOSAL CONSIDERATIONS**

Disposal Method: Dispose of in accordance with local, state, and federal regulations. Neutralize with a weak acid before disposal.

## **SECTION 14: TRANSPORT INFORMATION**

UN Number: UN1824

Shipping Name: Sodium Hydroxide Solution

Hazard Class: 8 (Corrosive)

Packing Group: III

## **SECTION 15: REGULATORY INFORMATION**

### **15.1. Safety, health and environmental regulations specific for the product in question**

No additional information available

## **SECTION 16: OTHER INFORMATION**

### **Disclaimer for Warranties:**

The information provided in this Material Safety Data Sheet (MSDS) is based on current knowledge and is intended to describe the product for safe handling, use, and disposal. Element Four Enterprise Pty Ltd makes no warranties, expressed or implied, regarding the accuracy, completeness, or suitability of this information for any particular purpose. The user is responsible for ensuring compliance with all applicable laws and regulations. Element Four Enterprise Pty Ltd shall not be held liable for any damages resulting from the use or misuse of this product or the information contained herein