

# MATERIAL SAFETY DATA SHEET



Conforms to 93/112/EC and ISO 11014-1

## 1. Chemical Product and Company Identification

**Product Name:** Biosol**Product Number:** LS-310

### Chemical Names/ Description:

Aqueous solution of strong alkali.

### Manufacturer

National Diagnostics  
305 Patton Drive  
Atlanta, GA 30336

### Telephone Numbers

(800) 526-3867  
(404) 699-2121

### Emergency Numbers

#### Chemtrec

**(800) 424-9300 (U.S. & Canada)**  
**01-703-527-3887 (outside U.S. & Canada)**

## 2. Composition/Information on Ingredients

Component	% Comp.	CAS #	EINECS #	TLV (Units)
Potassium Hydroxide	1 - 3	1310-58-3	2151813	2 mg/m <sup>3</sup>
Water	95 - 98	7732-18-5	231-791-2	

## EEC LABEL SYMBOL AND CLASSIFICATION



CORROSIVE

**R: 34****Causes burns****S: 26-37/39-45**

**In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. Wear suitable gloves and eye/face protection. In case of accident or if you feel unwell, seek medical advice immediately (show label where possible).**

## 3. Hazards Identification

### Appearance and Odor

Clear, colorless, odorless solution.

**EMERGENCY OVERVIEW - IMMEDIATE HAZARD**

DANGER! CORROSIVE. CAUSES SEVERE BURNS TO SKIN, EYES, RESPIRATORY TRACT, AND GASTROINTESTINAL TRACT. MATERIAL IS EXTREMELY DESTRUCTIVE TO ALL BODY TISSUES. MAY BE FATAL IF SWALLOWED. HARMFUL IF INHALED. (The health effects of exposure to diluted forms of this chemical are not well documented. They are expected to be less severe than those for concentrated forms which are referenced in the descriptions below.)

**EMERGENCY OVERVIEW - CHRONIC HAZARD WARNING:**

DEVELOPMENT OF A DEFATTING DERMATITIS ON PROLONGED CONTACT WITH THIS CHEMICAL HAS BEEN REPORTED. CONTINUED IRRITATION MAY LEAD TO INCREASED SUSCEPTIBILITY TO RESPIRATORY ILLNESS.

**Potential Health Effects**

**Inhalation**

Respiratory tract irritant, may cause serious burns on acute contact. Severe injury is usually avoided by the self-limiting coughing and sneezing symptoms.

**Ingestion**

Toxic! Corrosive to mucous membranes and may cause perforation of the esophagus and stomach.

**Skin**

Irritant, possibly corrosive if contact is prolonged.

**Eyes**

Irritant, possibly corrosive to eye tissues.

**Signs and Symptoms of Overexposure**

**Inhalation**

Pain, coughing, wheezing, sneezing.

**Ingestion**

Abdominal pain, nausea, vomiting, and general gastro-intestinal upset.

**Skin**

Soreness, redness, destruction of skin.

**Eyes**

Tearing, redness, pain and impaired vision.

**Carcinogenicity**

Not listed as a known or anticipated carcinogen by NTP or IARC.

**Mutagenicity**

No information found.

**Reproductive Toxicity**

No information found.

**Teratogenic Effects**

No information found.

**Routes of Entry**

No information found.

**Target Organ Statement**

Persons with pre-existing skin disorders or eye problems, or impaired kidney or respiratory function may be more susceptible to the effects of the substance.

**4. First Aid Measures**

**Inhalation**

Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Call a physician.

**Ingestion**

DO NOT INDUCE VOMITING. If swallowed and the person is conscious, immediately give large amounts of water. Get medical attention.

### **Skin**

Immediately flush skin with plenty of soap and water for at least 15 minutes while removing contaminated clothing and shoes. Get medical attention. Wash clothing before reuse. Thoroughly clean shoes before reuse.

### **Eyes**

Immediately flush eyes with plenty of water for at least fifteen minutes, lifting lower and upper eyelids occasionally. Get medical attention immediately.

## **5. Fire Fighting Measures**

Flash Point	N.A.	Flammable Limits	N.A.
Flash Point Method	N.A.	Autoignition temperature	N.A.

### **Extinguishing media**

Use media appropriate to the primary cause of fire.

### **Protective Equipment**

In the event of a fire, wear full protective clothing and NIOSH-approved self-contained breathing apparatus with full facepiece operated in the pressure demand or other positive pressure mode.

### **Hazardous Combustion Products**

N.A.

### **Unusual Fire and Explosion Hazards**

Not considered an explosion hazard.

NFPA Codes: Health 3 Flammability 0 Reactivity 1

## **6. Accidental Release Measures**

### **Steps to be taken in case material is released or spilled**

Ventilate area. Cover with absorbent material (vermiculite, dry sand, earth) to confine spill and sweep or shovel into container. Close container tightly. Avoid breathing vapors.

### **Waste Disposal Method**

Disposal must be made in accordance with applicable federal, state, and local regulations.

### **Personal Precautions**

Wear appropriate protective equipment as specified in section 8.

## **7. Handling and Storage**

### **Handling**

Avoid contact and inhalation. Do not get in eyes, on skin, on clothing. Wash thoroughly after handling.

### **Storage**

Keep in a tightly closed container, stored in a cooled, dry, ventilated area.

### **Storage Temperature**

Room Temperature

### **Disposal**

Observe all national, state, and local regulations regarding disposal.

## 8. Exposure Controls/Personal Protection

### Airborne Exposure Limits

Component: Potassium Hydroxide

ACGIH Threshold Limit Value (TLV): 2 mg/m<sup>3</sup>

OSHA Permissible Exposure Limit (PEL):

### Engineering Controls

A system of local and/or general exhaust is recommended to keep employee exposures below the Airborne Exposure Limits. Local exhaust ventilation is generally preferred because it can control the emissions of the contaminant at its source.

### Respiratory Protection

If the exposure limit is exceeded, wear a supplied air, full-facepiece respirator, airtight hood, or full-facepiece self-contained breathing apparatus.

### Eye Protection

Use chemical safety goggles and/or a full face shield where splashing is possible. Maintain eye wash fountain and quick-drench facilities in work area.

### Skin Protection

Wear impervious protective clothing, including boots, gloves, lab coat, apron or coveralls, as appropriate, to prevent skin contact.

### Other Control Measures

N.A.

## 9. Physical Properties

<b>Boiling point</b>	100C	<b>Evaporation Rate</b>	No Data
<b>Melting point</b>	0C	<b>Solubility in water</b>	Soluble
<b>Vapor pressure (mmHg)</b>	No Data	<b>pH</b>	13.5
<b>Vapor density (Air = 1)</b>	No Data	<b>Specific gravity (H<sub>2</sub>O = 1)</b>	1.05
<b>% volatile by volume</b>	97		

## 10. Stability and Reactivity

### Stability

Stable under ordinary conditions of use and storage.

### Conditions to Avoid

Incompatibles.

### Hazardous Decomposition Products

May form oxide at very high temperatures.

### Hazardous Polymerization

Will not occur

### Incompatibles

Potassium Hydroxide:

Acids.

Water:

No incompatibility data found.

## 11. Toxicological Information

### Product LD50 Values

Biosol	Oral Rat LD50 (mg/kg):	9750
Biosol	Dermal Rabbit LD50 (mg/kg):	No Data

### Component Cancer List Status

	NTP Carcinogen		IARC Category
	Known	Anticipated	
Potassium Hydroxide	No	No	None
Water	No	No	None

## 12. Ecological Information

### Potassium Hydroxide

TLm: 80 ppm/Mosquito fish/24 hr./Fresh water.

### Water

Not applicable.

## 13. Disposal Considerations

Observe all national, state, and local regulations regarding disposal.

## 14. Transport Information

### D.O.T.

Proper Shipping Name: Potassium Hydroxide Solution

Hazard Class: 8

UN Number: 1814

Packing Group: III

### I.A.T.A.

Proper Shipping Name: Potassium Hydroxide Solution

Hazard Class: 8

UN Number: 1814

Packing Group: III

### I.M.O.

Proper Shipping Name: Potassium Hydroxide Solution

Hazard Class: 8

UN Number: 1814

Packing Group: III

## 15. Regulatory Information

### United States

#### TSCA Regulatory Statement

All intentional ingredients are listed on the TSCA Inventory.

#### SARA 311/312 Hazard Categories

Component	Fire	Pressure	Reactivity	Acute	Chronic
Potassium Hydroxide	No	No	No	Yes	Yes
Water	No	No	No	No	No

### Europe

#### EEC Regulatory

All intentional ingredients are listed on the European EINECS Inventory.

#### EEC LABEL SYMBOL AND CLASSIFICATION



CORROSIVE

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## 16. Other Information

**NFPA Codes: Health 3 Flammability 0 Reactivity 1**

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