



## Safety Data Sheet

Revision: 01

Date: March 20, 2017

### SECTION 1 – PRODUCT AND COMPANY IDENTIFICATION

#### 1. Product Identifiers

Product Name	Sodium Hydroxide, Solution 0.1M
Catalog No	5078
Brand Name	Sodium Hydroxide Solution 0.1M
CAS No.	1310-73-2

#### 2. Relevant identified uses of the substance or mixture and uses advised against

Identified Uses	Laboratory chemicals, Manufacturer of substances
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#### 3. Details of the supplier of the safety data sheet

Company	Advanced BioMatrix, Inc. 5930 Sea Lion Place Carlsbad, CA 92010 USA Phone: 1-800-883-8220 1-760-929-0755 outside USA
Fax	1-510-217-3452

#### 4. Emergency telephone number

Emergency Phone No.	1-800-883-8220
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### SECTION 2 – HAZARDS IDENTIFICATION

#### 1. Classification of the substance or mixture

##### GHS Classification in accordance with 29 CFR 1910 (OSHA HCS)

Corrosive to metals (Category 1), H290

Skin corrosion (Category 1B), H314

Serious eye damage (Category 1), H318

Acute aquatic toxicity (Category 3), H402

For the full text of the H-Statements mentioned in this Section, see Section 16.

#### 2. GHS Label elements, including precautionary statements

Pictogram



Signal word	Danger
Hazard statement(s)	
H290	May be corrosive to metals.
H314	Causes severe skin burns and eye damage.
H402	Harmful to aquatic life.
Precautionary statement(s)	
P234	Keep only in original container.
P260	Do not breathe dust or mist.
P264	Wash skin thoroughly after handling.
P273	Avoid release to the environment.
P280	Wear protective gloves/ protective clothing/ eye protection/ face.
P301 + P330 + P331	IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
P303 + P361 + P353	IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
P304 + P340 + P310	IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER/doctor.
P305 + P351 + P338 + P310	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER/doctor.
P363	Wash contaminated clothing before reuse.
P390	Absorb spillage to prevent material damage.
P405	Store locked up.
P406	Store in corrosive resistant stainless steel container with a resistant inner liner.
P501	Dispose of contents/ container to an approved waste disposal plant.

**3. Hazards not otherwise classified (HNOC) or not covered by GHS – None.**

## SECTION 3 – COMPOSITION/INFORMATION ON INGREDIENTS

### 1. Substances

Synonyms	'Caustic soda'
Formula	HNaO
Molecular weight	40.00 g/mol
CAS-No.	1310-73-2
EC-No.	215-185-5
Index-No.	011-002-00-6
Registration number	01-2119457892-27-XXXX

### Hazardous components

Component	Classification	Concentration
<b>Sodium hydroxide</b>		
	Met. Corr. 1; Skin Corr. 1A; Eye Dam. 1; Aquatic Acute 3; H290, H314, H318, H402	<= 100 %

For the full text of the H-Statements mentioned in this Section, see Section 16.

## SECTION 4 – FIRST AID MEASURES

### 1. General advice

Consult a physician. Show this safety data sheet to the doctor in attendance.

### 2. Eye Contact

Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.  
Continue rinsing eyes during transport to hospital.

### 3. Skin Contact

Take off contaminated clothing and shoes immediately. Wash off with soap and plenty of water. Consult a physician.

### 4. Inhalation

If breathed in, move person into fresh air. If not breathing, give artificial respiration.  
Consult a physician.

### 5. Ingestion

Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

### 6. Most important symptoms and effects, both acute and delayed

The most important known symptoms and effects are described in the labeling (see section 2.2) and/or in section 11.

### 7. Indication of any immediate medical attention and special treatment needed

No data available

## SECTION 5 – FIREFIGHTING MEASURES

### 1. Extinguishing media

Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

### 2. Special hazards arising from the substance or mixture

No data available

### 3. Advice for firefighters

Wear self-contained breathing apparatus for firefight if necessary.

### 4. Further Information

No data available

## SECTION 6 – ACCIDENTAL RELEASE MEASURES

### 1. Personal precautions, protective equipment and emergency procedures

Avoid breath vapors, mist or gas.

For personal protection see section 8.

### 2. Environmental precautions

Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

Discharge into the environment must be avoided.

### 3. Methods and materials for containment and cleaning up

Pick up and arrange disposal without creating dust. Sweep up and shovel. Keep in suitable, closed containers for disposal.

### 4. Reference to other sections

For disposal see section 13.

## SECTION 7 – HANDLING AND STORAGE

### 1. Precautions for safe handling

Avoid formation of dust and aerosols.

Further processing of solid materials may result in the formation of combustible dusts.

The potential for combustible dust formation should be taken into consideration before additional processing occurs.

Provide appropriate exhaust ventilation at places where dust is formed. For precautions see section 2.2.

### 2. Conditions for safe storage, including any incompatibilities

Keep container tightly closed in a dry and well-ventilated place. Storage class (TRGS 510): Non-combustible, corrosive hazardous materials

Recommended storage: room temperature

#### Specific end use(s)

Apart from the uses mentioned in section 1.2 no other specific uses are stipulated.

## SECTION 8 – EXPOSURE CONTROLS/PERSONAL PROTECTION

### 1. Workplace control parameters

#### Components with workplace control parameters

Component	CAS No.	Value	Control parameters	Basis
Sodium Hydroxide	1310-73-2	TWA	2.000000 mg/m <sup>3</sup>	USA. Occupational Exposure Limits (OSHA) - Table Z-1 Limits for Air Contaminants
		C	2.000000 mg/m <sup>3</sup>	USA. ACGIH Threshold Limit Values (TLV)
	Remarks	Upper Respiratory Tract irritation Eye irritation Skin irritation		
		C	2 mg/m <sup>3</sup>	USA. ACGIH Threshold Limit Values (TLV)
		Upper Respiratory Tract irritation Eye irritation Skin irritation		
		C	2.000000 mg/m <sup>3</sup>	USA. NIOSH Recommended Exposure Limits
		C	2 mg/m <sup>3</sup>	California permissible exposure limits for chemical contaminants (Title 8, Article 107)

#### Derived No Effect Level (DNEL)

Application Area	Exposure routes	Health effect	Value
Workers	Inhalation	Long-term local effects	1 mg/m <sup>3</sup>
Consumers	Inhalation	Long-term local effects	1 mg/m <sup>3</sup>

## 2. Exposure controls

### **Appropriate engineering control**

Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

### **Personal protective equipment**

#### **Eye/Face 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**

Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique to avoid skin contact with this product. Dispose of the contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

#### Full contact

Material: Nitrile rubber

Minimum layer thickness: 0.11 mm

Break through time: 480 min

Material tested: Dermatril®

#### Splash contact

Material: Nitrile rubber

Minimum layer thickness: 0.11 mm

Break through time: 480 min Material tested: Dermatril®

If used in solution, or mixed with other substances, and under conditions which differ from EN 374, contact the supplier of the CE approved gloves. This recommendation is advisory only and must be evaluated by an industrial hygienist and safety officer familiar with the specific situation of anticipated use by our customers. It should not be construed as offering an approval for any specific use scenario.

#### **Body 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.

#### **Respiratory protection**

Where risk assessment shows air-purifying respirators are appropriate use a full-face respirator with multipurpose 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).

### Control of environmental exposure

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

Appearance	
Form	Liquid
Color	Clear
Odor	Odorless
Odor threshold	No data available
pH	14 at 50 g/l at 20 <sup>o</sup> C (68 <sup>o</sup> F)
Melting point/freezing point	318 <sup>o</sup> C (604 <sup>o</sup> F)
Initial boiling point and boiling range	1,390 <sup>o</sup> C (2,534 <sup>o</sup> F)
Flash point	Not applicable
Evaporation rate	No data available
Flammability	No data available
Upper/lower flammability	No data available
Vapor pressure	< 24.00 hPa (< 18.00 mmHg) at 20 <sup>o</sup> C (68 <sup>o</sup> F) 4.00 hPa (3.00 mmHg) at 37 <sup>o</sup> C (99 <sup>o</sup> F)
Vapor density	1.38 – (Air = 1.0)
Relative density	2.1300 g/cm <sup>3</sup>
Water solubility	ca. 1,260 g/l at 20 <sup>o</sup> C (68 <sup>o</sup> F)
Partition coefficient: n- octanol/water	No data available
Auto-ignition temperature	No data available
Decomposition temperature	No data available
Viscosity	No data available
Explosive properties	No data available
Oxidizing properties	No data available
Other safety information	
Bulk density	ca. 1,150 kg/m <sup>3</sup>
Relative vapour density	1.38 – (Air = 1.0)

## SECTION 10 – STABILITY AND REACTIVITY

Reactivity	No data available
Chemical stability	Stable under recommend storage conditions
Possibility of hazardous reactions	No data available

Conditions to avoid  
Incompatible material

No data available  
Strong oxidizing agents, Strong  
acids, Organic materials

Hazardous decomposition products:

Hazardous decomposition products formed under fire conditions. – Sodium oxides

Other decomposition products -

No data available

**\*\*In the event of fire: see section 5.\*\***

## **SECTION 11 – TOXICOLOGICAL INFORMATION**

Acute toxicity

No data available

Inhalation

No data available

Dermal

No data available

Skin corrosion/irritation

Rabbit

Result: Causes severe burns – 24h

Serious eye damage/eye irritation

Rabbit

Result: Corrosive to eyes – 24h

Respiratory or skin sensitization

Will not occur

Germ cell mutagenicity

No data available

Carcinogenicity

IARC

No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

NTP

No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

OSHA

No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

Reproductive toxicity

No data available

Specific target organ toxicity

Single exposure

No data available

Repeated exposure

No data available

Aspiration hazard

No data available

Additional information

RTECS

WB4900000

Material is extremely destructive to tissue of the mucous membranes and upper respiratory tract, eyes, and skin.

**\*\*To the best of our knowledge, the chemical, physical and toxicological properties have not been thoroughly investigated.\*\***



## SECTION 12 – ECOLOGICAL INFORMATION

Toxicity	
Toxicity to fish	LC50 - Gambusia affinis (Mosquito fish) - 125 mg/l - 96h LC50 - Oncorhynchus mykiss (rainbow trout) - 45.4 mg/l - 96h
Toxicity to daphnia and other aquatic invertebrates	Immobilization EC50 - Daphnia (water flea) - 40.38 mg/l - 48h
Persistence and degradability	The methods for determining the biological degradability are not applicable to inorganic substances.
Bioaccumulative potential	No data available
Mobility in soil	No data available
Results of PBT and vPvB assessment	PBT/vPvB assessment not available as chemical safety assessment not required/not conducted.
Other adverse effect	An environmental hazard cannot be excluded in the event of unprofessional handling or disposal. Harmful to aquatic life.

## SECTION 13 – DISPOSAL CONSIDERATIONS

### Product

Offer surplus and non-recyclable solutions to a licensed disposal company.

### Contaminated packaging

Dispose of as unused product.

## SECTION 14 – TRANSPORT INFORMATION

### DOT (US)

UN number	1823
Class	8
Packing group	II
Proper shipping name	Sodium hydroxide, solid
Reportable Quantity (RQ)	1000 lbs
Poison Inhalation Hazard	No

### IMDG

UN number	1823
Class	8
Packing group	II

MS-No  
Proper shipping name

F-A, S-B  
SODIUM HYDROXIDE, SOLID

IATA

UN number:  
Class  
Packing group  
Proper shipping name

1823  
8  
II  
Sodium hydroxide, solid

<b>SECTION 15 – REGULATORY INFORMATION</b>
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SARA 302 Components

No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

SARA 313 Components

This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

SARA 311/312 Hazards  
Massachusetts Right To Know Components  
Sodium Hydroxide  
Pennsylvania Right To Know Components  
Sodium Hydroxide  
New Jersey Right To Know Components  
Sodium Hydroxide  
California Prop. 65 Components

No SARA Hazards  
CAS No. 1310-73-2  
CAS No. 1310-73-2  
CAS No. 1310-73-2  
This product does not contain any chemicals known to State of California to cause cancer birth defects, or any other reproductive harm.

<b>SECTION 16 – OTHER INFORMATION</b>
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**Full text of H-Statements referred to under sections 2 and 3.**

Aquatic Acute  
Eye Dam.  
H290  
H314  
  
H318  
H402  
Met. Corr.

Acute aquatic toxicity  
Serious eye damage  
May be corrosive to metals  
Causes severe skin burns and eye damage.  
Causes serious eye damage  
Harmful to aquatic life  
Corrosive to metals

HMIS Rating	
Health hazard	3
Chronic Health Hazard	
Flammability	0
Physical Hazard	0
NFPA Rating	
Health hazard	3
Fire Hazard	0
Reactivity Hazard	0

**Further information:**

This information has been prepared by Advanced BioMatrix, Inc. The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. Advanced BioMatrix, Inc. and its Affiliates shall not be held liable for any damages resulting from handling or from contact with the above product. See [www.advancedbiomatrix.com](http://www.advancedbiomatrix.com) for additional terms and conditions of sale.

**Preparation Information:**

Advanced BioMatrix, Inc.  
1-800-883-8220