

## SPI Supplies Division

Structure Probe, Inc.

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Manufacturer's CAGE: 1P573

## Safety Data Sheet

Date Effective: May 21, 2020

02618-AB SPI-Chem™ Sodium Hydroxide, white pellets

### Section 1.1: Identification

Chemical Name/Synonyms ..... Sodium Hydroxide / Caustic Soda / Soda Lye

Product or Trade Name ..... SPI-Chem™ Sodium Hydroxide, white pellets, 97+%

CAS #'s ..... 1310-73-2

Chemical Formula..... NaOH

### Section 1.2: Relevant Uses/Restrictions

Laboratory chemical for sample preparation.

### Section 1.3: Supplier of the Safety Data Sheet

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### Section 1.4: Emergency telephone number

Emergencies

Contacting CHEMTREC:

24 Hour Emergency Use Only #'s...

Worldwide phone: 1-(703)-741-5970

Toll-free phone: 1-(800)-424-9300 USA + Canada only

### Section 2: Hazard Identification

#### 2.1 Classification of the substance

**Classification according to the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)**

Skin Corrosion, category 1B

#### 2.2 GHS Label elements



**Signal Word: Danger**

**Hazard-determining components of labeling:**

Sodium Hydroxide

**Hazard statements:**

H314: Causes severe skin burns and eye damage.

**Precautionary statements:**

P231: Handle under inert gas.

P260: Do not breathe dust/fume/gas/mist/vapors/spray.

P303 + P361 + P353: If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.

P305 + P351 + P338: If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P403 + P233: Store in a well-ventilated place. Keep container tightly closed.

P501: Dispose of contents/container in accordance with local/regional/national/international regulations.

**2.3 Other Hazards:**

**Results of PBT and vPvB assessment:**

PBT: Not applicable

vPvB: Not applicable

**Hazardous Material Information System USA**

Health ..... 4  
Fire Hazard ..... 0  
Reactivity ..... 0  
Personal Protection .....

**NFPA Rating (estimated)**

Health ..... 4  
Flammability..... 0  
Reactivity ..... 0

**Section 3: Composition**

**3.1 Substances:**

Sodium hydroxide      97+ %    CAS # 1310-73-2      EC # 215-185-5      Index # 011-002-00-6

RTECS # WB4900000

## **Section 4: First Aid Measures**

### **4.1 Description of first aid measures:**

**General Information:** Immediately remove any clothing soiled by the product.

**After Inhalation:** In case of unconsciousness place patient stably in side position for transportation.

**After Skin Contact:** Immediately wash with water and soap and rinse thoroughly.

**After Eye Contact:** Rinse opened eye for several minutes under running water. Then consult a doctor.

**After Ingestion:** Drink copious amounts of water and provide fresh air. Immediate call a doctor.

**Self-protection of the first aider:** No further relevant information available.

**4.2 Most important symptoms and effects, both acute and delayed:** No further relevant information available.

**4.3 Indication of any immediate medical attention and special treatment needed:** No further relevant information available.

## **Section 5: Fire Fighting Measures**

**5.1 Extinguishing media:** Use fire-fighting measures that suit the environment.

**5.2 Special hazards arising from the substance or mixture:** During heating or in case of fire, poisonous gases are produced.

**5.3 Hazardous combustion products:** Poisonous gases are produced on heating or in case of fire.

**5.4 Advice for firefighters:** Use fire-fighting measures that suit the environment.

**5.5 Special protective equipment and precautions for firefighters:** Mouth respiratory protective device.

## **Section 6: Accidental Release Measures**

### **6.1 Personal precautions:**

Mouth respiratory device.

Wear protective equipment.

Keep unprotected persons away.

### **6.2 Environmental precautions:**

No special measures required.

### **6.3 Methods and material for containment and cleaning up:**

Use neutralizing agent.

Dispose of contaminated material as waste according to Section 13.

Ensure adequate ventilation.

### **6.4 Reference to other sections:**

See Section 7 for information on safe handling.

See Section 8 for information on personal protection equipment.

See Section 13 for disposal information.

### **Protective Action Criteria for Chemicals:**

**PAC-1:** 0.5 mg/m<sup>3</sup>  
**PAC-2:** 5 mg/m<sup>3</sup>  
**PAC-3:** 50 mg/m<sup>3</sup>

## **Section 7: Handling and Storage**

### **7.1 Precautions for safe handling:**

#### **Protective measures:**

Thorough de-dusting.  
Ensure good ventilation/exhaustion at the workplace.

#### **Information about protection against explosions and fires:**

Keep respiratory protective device available.

### **7.2 Conditions for safe storage, including any incompatibilities:**

**Requirements to be met by storerooms and receptacles:** No special requirements.

**Information about storage in one common storage facility:** Not required.

#### **Further information about storage conditions:**

Keep receptacle tightly sealed.  
Store in cool, dry conditions in well-sealed receptacles.

### **7.3 Specific end uses:**

Laboratory chemical for sample preparation.

This material is not being offered for clinical or diagnostic applications, agricultural uses or for human or animal consumption.

## **Section 8: Exposure Controls and Personal Protection**

### **8.1 Control parameter and Personal Protection:**

**Additional information about design of technical systems:** No further data; see Section 7.

#### **Workplace exposure limits:**

CAS # 1310-73-2 Sodium Hydroxide:

PEL:	Long-term value:	2 mg/m <sup>3</sup>
REL:	Ceiling limit value:	2 mg/m <sup>3</sup>
TVL	Ceiling limit value:	2 mg/m <sup>3</sup>

**Biological limit values:** No further relevant information available.

### **8.2 Exposure controls:**

#### **8.2.1 Appropriate engineering controls:**

Ensure good ventilation exhaustion at the workplace.

#### **8.2.2 Individual protection measures:**

Keep away from foodstuffs, beverages and feed.  
Immediately remove all soiled and contaminated clothing.  
Wash hands before breaks and at the end of work.  
Avoid contact with the eyes and skin.

#### **Breathing equipment:**

In case of brief exposure or low pollution use respiratory filter device.  
In case of intensive or longer exposure, use self-contained respiratory protective device.

#### **Protection of the hands:**

Protective gloves:

The glove material has to be impermeable and resistant to the product/the substance/ the preparation/ the chemical nature.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation.

Material of gloves:

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer.

Penetration time of glove material:

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

Eye protection:

Tightly sealed goggles.

### **8.2.3 Environmental exposure controls:**

No further relevant information available.

## **Section 9: Physical and Chemical Properties**

### **9.1 Information on basic physical and chemical properties:**

**Appearance:** White pellets

**Odor:** Odorless

**Odor threshold:** Not determined

**pH:** Not applicable

**Melting point/Melting range:** 318.4 °C (605 °F)

**Boiling point/Boiling point range:** 1.390 °C (35 °F)

**Flash Point:** Not applicable

**Evaporation rate:** Not determined

**Flammability (solid, gas):** Not determined

**Upper/lower flammability or explosive limits:** Not determined

**Vapor Pressure:** Not applicable

**Vapor density:** Not applicable

**Relative density:** Not determined

**Density at 20 °C (68 °F):** 2.13 g/cm<sup>3</sup> (17.77485 lbs/gal)

**Solubility in water at 20 °C (68 °F):** 420 g/l

**Partition coefficient (n-octanol/water):** Not determined

**Auto-ignition temperature:** Not determined

**Decomposition temperature:** Not determined

**Viscosity:** Not applicable

**Explosive properties:** Not determined

**Oxidizing Properties:** Not determined

**Solvent content:**

**Organic solvents:** 0.0%

**VOC Content:** 0.0 g/l / 0.00 lb/gl

**Solids content:** 100.0%

**9.2 Other information:** No further relevant information available.

## **Section 10: Stability and Reactivity**

### **10.1 Reactivity:**

No further relevant information available.

### **10.2 Chemical Stability:**

**Thermal decomposition:** No decomposition if used according to specifications.

### **10.3 Possibility of Hazardous Reactions:**

No dangerous reactions known.

### **10.4 Conditions to avoid:**

No further relevant information available.

### **10.5 Incompatible materials:**

No further relevant information available.

### **10.6 Hazardous decomposition products:**

No dangerous decomposition products known.

## **Section 11: Toxicological Information**

**Information on the likely routes of exposure:**

**11.1 Information on toxicological effects:** CAS 3# 1310-73-2 Sodium hydroxide

### **A. Acute toxicity:**

LD50: 2000 mg/kg (rat)

### **B. Skin corrosion/irritation:**

Caustic effect on skin and mucous membranes

Swallowing will lead to a strong caustic effect on mouth and throat and to the danger of perforation of esophagus and stomach.

### **C. Serious eye damage/irritation:**

Strong caustic effect on the eye

### **D. Respiratory or skin sensitization:**

No sensitizing effects known

### **E. Germ cell mutagenicity:**

No further relevant information available.

### **F. Carcinogenicity:**

IARC (International Agency for Research on Cancer): Substance is not listed.

NTP (National Toxicology Program): Substance is not listed.

OSHA-Ca (Occupational Safety \* Health Administration): Substance is not listed

**G. Reproductive toxicity:**

No further relevant information available

**H. STOT-single exposure:**

No further relevant information available

**I.. STOT-repeated exposure:**

No further relevant information available

**J. Aspiration hazard:**

No further relevant information available

**Section 12: Ecological Information**

**12.1 Toxicity:** No further relevant information available

**12.2 Persistence and degradability:** No further relevant information available

**12.3 Bio-accumulative potential:** No further relevant information available

**12.4 Mobility in soil:** No further relevant information available

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

PBT: Not applicable

vPvB: Not applicable

**12.6 Other adverse effects:** No further relevant information available

**Section 13: Disposal Considerations**

**13.1 Waste treatment methods:**

Recommendation:

Do not allow product to reach sewage system.

Uncleaned packagings:

Recommendation: Disposal must be made according to official regulations.

**Section 14: Transport Information**

**DOT:**

UN Number: UN1823  
UN proper shipping name: Sodium hydroxide, solid  
Class: 8 Corrosive substances  
Packing group: II

Quantity limitations: on passenger aircraft/rail: 15 kg  
On cargo aircraft only: 50 kg

Hazardous substance: 1000 lbs, 454 kg

**IATA:**

UN Number: UN1823  
UN proper shipping name: SODIUM HYDROXIDE, SOLID  
Class: 8 Corrosive substances

Packing group: II

**IMDG:**

UN Number: UN1823  
UN proper shipping name: SODIUM HYDROXIDE, SOLID  
Class: 8 Corrosive substances  
Packing group: II

Limited quantities (LQ): 1 kg  
Excepted quantities (EQ): Code: E2  
Maximum net quantity per inner packaging: 30 g  
Maximum net quantity per outer packaging: 500 g

Environmental hazards:  
Marine pollutant: No

Special precautions for user: Warning: Corrosive substances  
Danger code (Kemler): 80  
Segregation groups: Alkalis  
Storage Category: A  
Segregation Code: SG35 Stow "separated from" acids

UN "Model Regulation": UN 1823 SODIUM HYDROXIDE, SOLID, 8, II

**Section 15: Regulatory Information**

**15.1 Safety, health and environmental regulations/ legislation specific for the substance:**  
**Sodium Hydroxide**

**U.S. Government Regulations:**

**SARA Section 355 (extremely hazardous substances): Substance is not listed.**

**SARA Section 313 (Specific toxic chemical listings): Substance is not listed.**

**TSCA (Toxic Substances Control Act): Substance is on the TSCA Active Inventory List.**

**Carcinogenic categories:**

**EPA (Environmental Protection Agency): Substance is not listed.**  
**TLV (Threshold Limit Value established by ACGIH): Substance is not listed.**  
**NIOSH-Ca (National Institute for Occupational Safety and Health): Substance is not listed.**

**California Proposition 65:**

**Chemicals known to cause cancer: Substance is not listed.**  
**Chemicals known to cause reproductive toxicity for females: Substance is not listed.**  
**Chemicals known to cause reproductive toxicity for males: Substance is not listed.**  
**Chemicals known to cause developmental toxicity: Substance is not listed.**

**GHS Label elements:**

This substance is classified and labeled according to the Globally Harmonized System (GHS).





**Signal Word: Danger**

**Hazard-determining components of labeling:**

Sodium Hydroxide

**Hazard statements:**

H314: Causes severe skin burns and eye damage.

**Precautionary statements:**

P231: Handle under inert gas.

P260: Do not breathe dust/fume/gas/mist/vapors/spray.

P303 + P361 + P353: If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.

P305 + P351 + P338: If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P403 + P233: Store in a well-ventilated place. Keep container tightly closed.

P501: Dispose of contents/container in accordance with local/regional/national/international regulations.

**15.2 Chemical Safety Assessment:** A Chemical Safety Assessment has not been carried out.

Date of Preparation: May 21, 2020.

#### **Abbreviations and acronyms**

IMDG: International Maritime Code for Dangerous Goods

DOT: US Department of Transportation

CMRG: Chemical Manufacturer's Recommended Guidelines

IATA: International Air Transport Association

ACGIH: American Conference of Governmental Industrial Hygienists

AIHA: American Industrial Hygiene Association

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

NFPA: National Fire Protection Association (USA)

HMIS: Hazardous Materials Identification System (USA)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bio-accumulative and Toxicological

vPvB: very Persistent and very Bio-accumulative

NIOSH: National Institute for Occupational Safety

OSHA: Occupational Safety Health

ATE: Acute Toxicity Estimates

TLV: Threshold Limit Value

PEL: Permissible Exposure Limit

REL: Recommended Exposure Limit

STEL: Short Term Exposure Limit

CEIL: Ceiling  
TSCA: Toxic Substances Control Act (USA)  
DSL: Domestic Substances List (Canada)  
PICCS: Philippine Inventory of Chemicals and Chemical Substances  
ENCS: Existing and New Chemical Substances (Japan)  
AICS: Australian Inventory of Chemical Substances  
IECSC: Inventory of Existing Chemical Substances in China  
KECL: Korea Existing Chemicals List

## **Section 16: Other Information**

### **Disclaimer of Liability:**

Caution! Do not use SPI Supplies products or materials in applications involving implantation within the body; direct or indirect contact with the blood pathway; contact with bone, tissue, tissue fluid, or blood; or prolonged contact with mucous membranes. Products offered by SPI Supplies are not designed or manufactured for use in implantation in the human body or in contact with internal body fluids or tissues. SPI Supplies will not provide to customers making devices for such applications any notice, certification, or information necessary for such medical device use required by US FDA (Food and Drug Administration) regulation or any other statute. SPI Supplies and Structure Probe, Inc. make no representation, promise, express warranty or implied warranty concerning the suitability of these materials for use in implantation in the human body or in contact with internal body tissues of fluids.

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