

## Section 1: Identification

<b>COMPANY:</b>	Sportsman Consulting, LLC DBA Vinmetrica 6084 Corte del Cedro, Suite 105 Carlsbad, CA 92011
<b>PRODUCT NAME:</b>	0.133N Sodium Hydroxide Solution, TA Titrant PN SC-200-2; SC-200-2-480
<b>SYNONYMS:</b>	Caustic soda; Lye
<b>Recommended Use</b>	Laboratory Chemicals
<b>Uses advised against:</b>	Not for food, drug, pesticide or biocidal product use
<b>EMERGENCY PHONE:</b>	408-887-9230
<b>INFORMATION PHONE:</b>	760-494-0597 x 102

## Section 2: Hazard(s) Identification

### Classification:

This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

### **GHS-US Classification**

Skin Corr 1B: H314

Eye Dam 1: H318

**SIGNAL WORD:** Danger

### **HAZARD STATEMENTS:**

H314 – Causes severe skin burns and eye damage.



### **Precautionary Statement(s):**

#### **Preventions:**

Avoid breathing dust/fume/gas/mist/vapors/spray.

Wear eye protection, face protection, protective clothing, protective gloves.

Wash exposed skin thoroughly after handling.

#### **Response:**

IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.

IF SWALLOWED: rinse mouth. Do NOT induce vomiting.

IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.

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 or doctor/physician.

Wash contaminated clothing before reuse.

**Storage:**

Store locked up.

**Disposal:**

Dispose of contents/container according to Federal, State and Local Regulations.

**Hazards not otherwise classified (HNOC):**

None identified.

**Section 3: Composition/Information on Ingredients**

CHEMICAL	CAS NUMBER	WEIGHT %
Water	7732-18-5	99.4%
Sodium Hydroxide	7647-01-0	0.6%

**Section 4: First Aid Measures**

Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice (show label where possible).

**Inhalation:** Remove from exposure and move to fresh air and keep at rest in a position comfortable for breathing. Immediately call a POISON CENTER or doctor/physician.

**Ingestion:** Do NOT induce vomiting. Immediately call a POISON CENTER or doctor/physician. Rinse mouth.

**Skin Contact:** Immediately call a POISON CENTER or doctor/physician. Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.

**Eye Contact:** Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or doctor/physician.

**Most important symptoms and effects, both acute and delayed:**

**Symptoms/injuries:** Causes severe skin burns and eye damage.

**Symptoms/injuries after inhalation:** Coughing. Irritation of the respiratory tract. Irritation of the nasal mucous membranes.

**Symptoms/injuries after skin contact:** Caustic burns/corrosion of the skin.

**Symptoms/injuries after eye contact:** Causes serious eye damage.

**Symptoms/injuries after ingestion:** Abdominal pain. Bleeding of the gastrointestinal tract. Burns to the gastric/intestinal mucosa. Nausea. Possible esophageal perforation.

**Symptoms/injuries upon intravenous administration:** Not available

**Chronic symptoms:** Not available.

**Section 5: Fire Fighting Measures**

**Suitable Extinguishing Media:** Carbon dioxide. Dry powder. Water spray. Foam. Sand.

**Unsuitable Extinguishing Media:** No information available. Do not use a heavy water stream.

**Flash Point:** Not flammable

**Method:** No information

**Autoignition Temperature:** No information available

**Explosion Limits**

**Upper:** No data available

**Lower:** No data available

**Sensitivity to Mechanical Impact:** No information available

**Sensitivity to Static Discharge:** No information available

**Specific Hazards Arising from the Chemical:** Reacts with (some) metals; releases of highly flammable gasses/vapors (hydrogen). Thermal decomposition generates: corrosive vapours.

**Hazardous Combustion Products:** Thermal decomposition can lead to release of irritating gases and vapors.

**Protective Equipment and Precautions for Firefighters:** Use water spray or fog for cooling exposed containers. Exercise caution with fighting any chemical fire. In case of fire, stop leak if safe to do so. When cooling/extinguishing: no water in the substance. Avoid (reject) fire-fighting water to enter environment. As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

**NFPA Rating:**

Health: 3

Flammability: 0

Instability: 1

Physical Hazards: n/a

## Section 6: Accidental Release Measures

Eliminate ignition sources. Ensure adequate ventilation. Wear SCBA when entering area unless atmosphere is proved to be safe.

**Personal Precautions:** Use personal protective equipment. Ensure adequate ventilation. Avoid contact with skin, eyes, and clothing.

**Environmental Precautions:** Avoid release to the environment. Prevent entry to sewers and public waters. Notify authorities if liquid enters sewers or public waters.

**Methods for Containment and Clean Up:** Soak up with inert absorbent material. Carefully collect the spill/leftovers. Clean contaminated surfaces with an excess of water. Wash clothing and equipment after handling. Soak up spills with inert solids, such as clay or diatomaceous earth as soon as possible. Collect spillage. Store away from other materials.

## Section 7: Handling and Storage

**Handling:** May be corrosive to metals. Avoid contact with skin, eyes, and clothing. Remove contaminated clothing immediately. Use corrosion proof equipment. Wash hands and other exposed areas with mild soap and water before eating, drinking, or smoking and when leaving work. Ensure adequate ventilation in process area to prevent formation of vapor. Do not breathe vapors or spray mist.

**Storage:** Comply with applicable regulations. Keep container closed when not in use. Keep only in the original container in a cool, well ventilated place away from: incompatible materials (strong acids, metals; sources of ignition, direct sunlight). Store at 5-30°C. Keep substance away from (strong) acids, metals, metal powders.

Keep locked up. Store in a well ventilated place.

## Section 8: Exposure Controls/ Personal Protection

Exposure Guidelines:

Component	ACGIH TLV	OSHA PEL	NIOSH IDLH	Mexico OEL (TWA)
Sodium Hydroxide	Ceiling: 2mg/m3	TWA: 2mg/m3		

**Engineering Measures:** Ensure adequate ventilation, especially in confined areas. Ensure that eyewash stations and safety showers are close to the workstation location.

**Personal Protective Equipment:**

**Eye/Face Protection:** Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA’s eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166.

**Skin and Body Protection:** Wear appropriate protective gloves and clothing to prevent skin exposure.

**Respiratory Protection:** Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced.

**Hygiene Measures:** Handle in accordance with good industrial hygiene and safety practice.

**Section 9: Physical and Chemical Properties**

**Physical State:** Liquid  
**Appearance:** Clear  
**Odor:** Odorless  
**Odor Threshold:** No information available  
**pH:** ≥14  
**Melting Point:** No information available  
**Boiling Point:** No information available  
**Flash Point:** Not applicable  
**Evaporation Rate:** No information available  
**Flammability (solid, gas):** None  
**Flammability or Explosive limits:**  
     **Upper:** No data available  
     **Lower:** No data available  
**Vapor Pressure:** No data available  
**Density:** 1.04g/ml  
**Specific Gravity:** No data available  
**Solubility:** Soluble in water  
**Partition coefficient, n-octanol/water:** No data available  
**Autoignition Temperature:** No information available  
**Decomposition Temperature:** No information available  
**Viscosity:** No information available

**Section 10: Stability and Reactivity**

**Reactive Hazard:** Reacts with (some) metals: release of highly flammable gasses/vapors (hydrogen). Thermal decomposition generates: corrosive vapors.  
**Stability:** Stable under ordinary conditions of use and storage.  
**Conditions to Avoid:** Incompatible materials. Extremely high or low temperatures.  
**Incompatible Materials:** Metals, Strong Acids.  
**Hazardous Decomposition Products:** Sodium oxide. Thermal decomposition generates: corrosive vapors.  
**Hazardous Polymerization:** Does not occur.  
**Hazardous Reactions:** Not established.

**Section 11: Toxicological Information**

**Acute Toxicity:** Not classified

**Product Information:** No acute toxicity information is available for this product

**Component Information:**

Component	LD50 Oral	LD50 Dermal	LC50 Inhalation
Water	≥ 90000 mg/kg (Rat)	35156 mg/kg (Rabbit)	Not listed
Sodium Hydroxide	Not listed	Not listed	Not listed

**Toxicologically Synergistic:** No information available

**Products**

Delayed and immediate effects as well as chronic effects from short and long term exposure.

**Skin corrosion/irritation:** Causes severe skin burns and eye damage. pH:  $\geq 14$

**Serious eye damage/irritation:** Causes serious eye damage. pH:  $\geq 14$

**Respiratory or skin sensitization:** Not classified. (Based on available date, the classification criteria are not met).

**Carcinogenicity:** The table below indicates whether each agency has listed any ingredient as a carcinogen.

**Mutagenic Effects:** Not classified. (Based on available date, the classification criteria are not met)

**Reproductive Effects:** Not classified. (Based on available date, the classification criteria are not met)

**Developmental Effects:** No information available

**Teratogenicity:** Teratogenic effects have occurred in experimental animals.

**STOT – single exposure:** Not classified. (Based on available date, the classification criteria are not met)

**STOT – repeated exposure:** Not classified. (Based on available date, the classification criteria are not met)

**Aspiration hazard:** Not classified. (Based on available date, the classification criteria are not met)

**Potential adverse human health effects and symptoms:** Not classified. (Based on available date, the classification criteria are not met)

**Symptoms / effects, both acute and delayed:**

**After inhalation:** Coughing. Irritation of the respiratory tract. Irritation of the nasal mucous membranes.

**Skin contact:** Caustic burns/corrosion of the skin.

**Eye contact:** Causes serious eye damage.

**Ingestion:** Abdominal pain. Bleeding of the gastrointestinal tract. Burns to the gastric/intestinal mucosa. Nausea. Possible esophageal perforation.

**Endocrine Disruptor Information:** No information available

**Other Adverse Effects:** No information available.

**Section 12: Ecological Information**

**Ecotoxicity**

**General:** The product is not considered harmful to aquatic organisms nor to cause long-term adverse effects in the environment

**Water:** Toxic to aquatic life.

Sodium Hydroxide – 0.133N

LC50 fishes 1	1182 mg/l
EC50 Daphnia 1	1052 mg/l

**Persistence and Degradability:** No data available. Not established.

**Bioaccumulation/Accumulation:** No data available. Not established.

**Mobility:** No data available. Not established.

**Section 13: Disposal Considerations**

**Waste Disposal Methods:** Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. Chemical waste generators must also consult local, regional, and national hazardous water regulations to ensure complete and accurate classification.

## Section 14: Transport Information

### DOT:

UN-No.: 1824

DOT NA no: UN1824

DOT Proper Shipping Name : Sodium hydroxide solution  
 Department of Transportation (DOT) Hazard Classes : 8 - Class 8 - Corrosive material 49 CFR 173.136  
 Hazard labels (DOT) : 8 - Corrosive substances



Packing group (DOT) : II - Medium Danger  
 DOT Special Provisions (49 CFR 172.102) : B2 - MC 300, MC 301, MC 302, MC 303, MC 305, and MC 306 and DOT 406 cargo tanks are not authorized.  
 IB2 - Authorized IBCs: Metal (31A, 31B and 31N); Rigid plastics (31H1 and 31H2); Composite (31HZ1). Additional Requirement: Only liquids with a vapor pressure less than or equal to 110 kPa at 50 C (1.1 bar at 122 F), or 130 kPa at 55 C (1.3 bar at 131 F) are authorized.  
 N34 - Aluminum construction materials are not authorized for any part of a packaging which is normally in contact with the hazardous material.  
 T7 - 4 178.274(d)(2) Normal..... 178.275(d)(3)  
 TP2 - a. The maximum degree of filling must not exceed the degree of filling determined by the following: Degree of filling =  $95 / (1 + a (tr - tf))$  Where: tr is the maximum mean bulk temperature during transport, tf is the temperature in degrees celsius of the liquid during filling, and a is the mean coefficient of cubical expansion of the liquid between the mean temperature of the liquid during filling (tf) and the maximum mean bulk temperature during transportation (tr) both in degrees celsius. b. For liquids transported under ambient conditions may be calculated using the formula:  $a = (d15 - d50) / 35 \cdot d50$  Where: d15 and d50 are the densities (in units of mass per unit volume) of the liquid at 15 C (59 F) and 50 C (122 F), respectively.  
 DOT Packaging Exceptions (49 CFR 173.xxx) : 154  
 DOT Packaging Non Bulk (49 CFR 173.xxx) : 202  
 DOT Packaging Bulk (49 CFR 173.xxx) : 242  
 Marine pollutant : No  
 Other information : No supplementary information available.

State during transport (ADR-RID) : as liquid.

#### Overland transport

No additional information available

#### Transport by sea

DOT Vessel Stowage Location : A - The material may be stowed "on deck" or "under deck" on a cargo vessel and on a passenger vessel.

DOT Vessel Stowage Other : 52 - Stow "separated from" acids

#### Air transport

DOT Quantity Limitations Passenger aircraft/rail (49 CFR 173.27) : 1 L

DOT Quantity Limitations Cargo aircraft only (49 CFR 175.75) : 30 L

## Section 15: Regulatory Information

### US FEDERAL

SARA Section 311/312 Hazard classes: immediate (acute) health hazard

Listed on the United States TSCA (Toxic Substances Control Act) inventory  
RQ (reportable quantity, section 304 of EPA's List of Lists): 1000 lb

**INTERNATIONAL:**

Canada

WHMIS Classification: Class E – corrosive material

EU – No additional information available.

**Section 16: Other Information****HMIS III Rating:**

Health: 3

Flammability: 0

Physical: 1

Personal Protection: D

**Product Use:** Laboratory Reagent.**Disclaimer:**

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