Material Safety Data Sheet

Sodium Hydroxide Solution, 2 M

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1. Product Identification

Product Name: CA-6 Manganese Reagent 1
NaOH Solution
CAS No.: Not applicable to mixtures.
Molecular Weight: Not applicable to mixtures.
Chemical Formula: 2 Molar NaOH Solution
Product Codes:
ECD P/N 2010076-1
Manufacture By:
Electro-Chemical Devices, Inc.
1681 Kettering
Irvine, CA 92614
Phone: (800) 729-1333

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2. Hazards Identification

2.1 Classification of the substance or mixture

GHS Classification in accordance with 29 CFR 1910 (OSHA HCS)
Skin corrosion (Category 1A), H314
Serious eye damage (Category 1), H318
For the full text of the H-Statements mentioned in this Section, see Section 16.

2.2 GHS Label elements, including precautionary statements

Pictogram	
Signal word	Danger
Hazard statement(s)	
H314	Causes severe skin burns and eye damage.
Precautionary statement(s)	
P264	Wash skin thoroughly after handling.
P280	Wear protective gloves/ protective clothing/ eye protection/ face protection.
P301 + P330 + P331	IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
P303 + P361 + P353	IF ON SKIN (or hair): Remove/ Take off immediately all contaminated clothing. Rinse skin with water/ shower.
P304 + P340	IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.

P305 + P351 + P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P310	Immediately call a POISON CENTER or doctor/ physician.
P321	Specific treatment (see supplemental first aid instructions on this label).
P405	Store locked up.
P501	Dispose of contents/ container to an approved waste disposal plant.

3. Composition/Information on Ingredients

Synonyms	Sodium Hydroxide Solution
Formula	NaOH
Molecular Weight	40.00 g/mol
CAS-No.	7778-50-9

Component		Classification	Concentration
Sodium hydroxide			
CAS-No.	1310-73-2	Met. Corr. 1; Skin Corr. 1A; Eye Dam. 1; Aquatic Acute 3; H290, H314, H318, H402	>= 4 – 10 %
EC-No.	215-185-5		
Index-No.	011-002-00-6		
Registration number	01-2119457892-27-XXXX		

For the full text of the H-Statements and R-Phrases mentioned in this Section, see Section 16

4. First Aid Measures

4.1 Description of first aid measures

General advice

Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area.

If inhaled

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

In case of skin contact

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

In case of eye contact

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

If swallowed

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

4.2 Most important symptoms and effects, both acute and delayed

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

4.3 Indication of any immediate medical attention and special treatment needed
No data available

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5. Fire Fighting Measures

5.1 Extinguishing media
Suitable extinguishing media
Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.
5.2 Special hazards arising from the substance or mixture
Sodium oxides
Sodium oxides
5.3 Advice for firefighters
Wear self-contained breathing apparatus for firefighting if necessary.
5.4 Further information
No data available

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6. Accidental Release Measures

6.1 Personal precautions
Use personal protective equipment. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas.
6.2 Environmental precautions
Prevent further leakage or spillage if safe to do so. Do not let product enter drains.
6.3 Methods and materials for containment and cleaning up
Soak up with inert absorbent material and dispose of as hazardous waste. Keep in suitable, closed containers for disposal.

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7. Handling and Storage

Precautions for safe handling
Avoid contact with skin and eyes. Avoid inhalation of vapor or mist.
Conditions for safe storage
Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage.

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8. Exposure Controls/Personal Protection

8.1 Control Parameters

Components with workplace control parameters

Component	CAS-No.	Value	Control Parameters	Basis
Sodium hydroxide	1310-73-2	C	2 mg/m3	USA. OSHA - TABLE Z-1 Limits for Air Contaminants - 1910.1000

		TWA	2 mg/m3	USA. Occupational Exposure Limits (OSHA) - Table Z-1 Limits for Air Contaminants
		C	2 mg/m3	USA. ACGIH Threshold Limit Values (TLV)
	Remarks	Upper Respiratory Tract irritation Eye irritation Skin irritation		
		C	2 mg/m3	USA. NIOSH Recommended Exposure Limits

8.2 Exposure controls

Appropriate engineering controls

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. Face shield (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 (without touching glove's outer surface) to avoid skin contact with this product. Dispose of 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® (KCL 740 / Aldrich Z677272, Size M)

Splash contact

Material: Nitrile rubber

Minimum layer thickness: 0.11 mm

Break through time: 480 min

Material tested: Dermatril® (KCL 740 / Aldrich Z677272, Size M) data source: KCL GmbH, D-36124 Eichenzell, phone +49 (0)6659 87300, e-mail sales@kcl.de, test method: EN374

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
Do not let product enter drains.

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9. Physical and Chemical Properties

Appearance:

a)	Appearance Form:	liquid
b)	Odor	No data available
c)	Odor Threshold	No data available
d) pH		No data available
e) Melting point/freezing point		No data available
f) Initial boiling point and boiling range		No data available
g) Flash point		No data available
h) Evaporation rate		No data available
i) Flammability (solid, gas)		No data available
j) Upper/lower flammability or explosive limits		No data available
k) Vapor pressure		No data available
l) Vapor density		No data available
m) Relative density		No data available
n) Water solubility		No data available
o) Partition coefficient: n-octanol/water		No data available
p) Auto-ignition temperature		No data available
q) Decomposition temperature		No data available
r) Viscosity		No data available
s) Explosive properties		No data available
t) Oxidizing properties		No data available

9.2 Other safety information
No data available

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10. Stability and Reactivity

10.1 Reactivity	No data available
10.2 Chemical stability	Stable under recommended storage conditions.
10.3 Possibility of hazardous reactions	No data available
10.4 Conditions to avoid	No data available
10.5 Incompatible materials	acids, Organic materials, Chlorinated solvents, Aluminum, Phosphorus, Tin/tin oxides, Zinc
10.6 Hazardous decomposition products	Other decomposition products - No data available In the event of fire: see section 5

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11. Toxicological Information

11.1 Information on toxicological effects

Acute toxicity

No data available

Inhalation: No data available

No data available

Skin corrosion/irritation

No data available

Serious eye damage/eye irritation

No data available

Respiratory or skin sensitisation

No data available

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.

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

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

No data available

Specific target organ toxicity - single exposure

No data available

Specific target organ toxicity - repeated exposure

No data available

Aspiration hazard

No data available

Additional Information

RTECS: Not available

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

Inhalation of vapors may cause:, spasm, inflammation and edema of the bronchi, spasm, inflammation and edema of the larynx, Symptoms of exposure may include burning sensation, coughing, wheezing, laryngitis, shortness of breath, headache, nausea, and vomiting.

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12. Ecological Information

12.1 Toxicity

No data available

12.2 Persistence and degradability

No data available

12.3 Bio-accumulative potential
No data available
12.4 Mobility in soil
No data available
12.5 Results of PBT and vPvB assessment
PBT/vPvB assessment not available as chemical safety assessment not required/not conducted
12.6 Other adverse effects
No data available

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13. Disposal Considerations

Product
Offer surplus and non-recyclable solutions to a licensed disposal company. Contact a licensed professional waste disposal service to dispose of this material. Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber.
Contaminated packaging
Dispose of as unused product.

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14. Transport Information

DOT (US)

UN number: 1824 Class: 8 Packing group: II
Proper shipping name: Sodium hydroxide solution
Poison Inhalation Hazard: No

IMDG

UN number: 1824 Class: 8 Packing group: II EMS-No: F-A, S-B
Proper shipping name: SODIUM HYDROXIDE SOLUTION

IATA

UN number: 1824 Class: 8 Packing group: II
Proper shipping name: SODIUM HYDROXIDE SOLUTION

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15. Regulatory Information

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.
Massachusetts Right To Know Components

	CAS-No.	Revision Date
Sodium hydroxide	1310-73-2	2007-03-01

Pennsylvania Right To Know Components

	CAS-No.	Revision Date
Water	7732-18-5	2007-03-01
Sodium hydroxide	1310-73-2	

New Jersey Right To Know Components

	CAS-No.	Revision Date
Water	7732-18-5	2007-03-01
Sodium hydroxide	1310-73-2	

California Prop. 65 Components

This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

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16. Other Information

Text of H-code(s) mentioned in Section 3

Aquatic Acute	Acute aquatic toxicity
Eye Dam.	Serious eye damage
H290	May be corrosive to metals.
H314	Causes severe skin burns and eye damage.
H318	Causes serious eye damage.
H402	Harmful to aquatic life.
Met. Corr.	Corrosive to metals
Skin Corr.	Skin corrosion

Label Precautions:

HMIS Rating

Health hazard: 3

Chronic Health Hazard:

Flammability: 0

Physical Hazard 1

NFPA Rating

Health hazard: 3

Fire Hazard: 0

Reactivity Hazard: 0

Product Use:

Laboratory Reagent.

Revision Information:

MSDS-2010076-1 rev. A January 2015

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