


SDS	EFFECTIVE DATE 2/23/15	ISOPURE 	REV C	SDS-215028
SAFETY DATA SHEET: Step 2 (3,000 – 22,000 G.P.D.)				



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Safety Data Sheet

Step 2 Cleaner MD400 Series

Product: Step 2 Cleaner MD400 Series

SDS: 215028

Preparation Date: 01/30/2015

Rev C

Section 1 – Product and Company Identification

Product Chemical Name: Sodium Hydroxide USP Reagent Grade

Chemical Formula: NaOH

Recommended Use: Laboratory use


In Case of Emergency Call: CHEMTREC – 800-424-9300 or 703-527-3887

Synonyms: Caustic Soda Solution

Section 2 – Hazard(s) Identification

***** Emergency Overview – Potential Health Effects*****

OSHA Hazards: Corrosive, Target organ effect

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Target Organs: Kidney, Liver, Eyes, Skin, Mucous Membranes, Respiratory System, and Cardiovascular system

Signal Words: Danger

Pictograms:



GHS Classification:

Skin corrosion	Category 1
Serious eye damage	Category 1

GHS Label Elements, including precautionary statements:

Hazard Statements:

H314	Causes severe skin burns and eye damage.
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Precautionary Statements:

P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do so. Continue rinsing.
P310	Immediately call a POISON CENTER or doctor/physician.

Potential Health Effects

Eyes	Causes severe eye burns.
Inhalation	May be harmful if inhaled. Material is extremely destructive to the tissue of the mucous membranes and upper respiratory tract.
Skin	May be harmful if absorbed through skin. Causes skin burns.
Ingestion	May be harmful if swallowed.

NFPA Ratings

Health	3
Flammability	0
Reactivity	0

HMIS Ratings

Health	3
Fire	0
Reactivity	0

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Specific hazard	Not Available
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Personal	D
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<i>Section 3 - Composition/Information on Ingredients</i>
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Component	Weight %	CAS #	EINECS# / ELINCS#	Formula	Molecular Weight
Sodium Hydroxide	8	1310-73-2	215-185-5	NaOH	40.00 g/mol
Water	Balance	7732-18-5	231-791-2	H ₂ O	18.00 g/mol


<i>Section 4 - First-Aid Measures</i>
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Eyes	Immediately rinse with plenty of water for at least 15 minutes and seek medical attention immediately.
Inhalation	Move casualty to fresh air and keep at rest. If breathing is difficult, give oxygen. If not breathing, give artificial respiration. Get medical attention immediately.
Skin	Immediately flush with plenty of water for at least 15 minutes while removing contaminated clothing and wash using soap. Get medical attention immediately.
Ingestion	Do Not Induce Vomiting! Never give anything by mouth to an unconscious person. If conscious, wash out mouth with water. Get medical attention.

<i>Section 5 - Fire-Fighting Measures</i>
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Suitable (and unsuitable) extinguishing media	Product is not flammable. Use appropriate media for adjacent fire. Cool containers with water.
Special protective equipment and precautions for firefighters	Wear self-contained, approved breathing apparatus and full protective clothing, including eye protection and boots.
Specific hazards arising from the chemical	Emits toxic fumes (sodium oxide) under fire conditions. (See also Stability and Reactivity section)

<i>Section 6 - Accidental Release Measures</i>

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Personal precautions, protective equipment and emergency procedures	See section 8 for recommendations on the use of personal protective equipment.
Environmental precautions	Prevent spillage from entering drains. Any release to the environment may be subject to federal/national or local reporting requirements.
Methods and materials for containment and cleaning up	Neutralize spill. Absorb spill with noncombustible absorbent material, then place in a suitable container for disposal. Clean surfaces thoroughly with water to remove residual contamination. Dispose of all waste and cleanup materials in accordance with regulations.

Section 7 - Handling and Storage

Precautions for safe handling

See section 8 for recommendations on the use of personal protective equipment. Use with adequate ventilation. Wash thoroughly after using. Keep container closed when not in use. Avoid formation of aerosols.

Conditions for safe storage, including any incompatibilities

Store in cool, dry well ventilated area. Keep away from incompatible materials (see section 10 for incompatibilities).

Section 8 - Exposure Controls / Personal Protection


Occupational exposure controls:

Component	Exposure Limits	Basis	Entity
Sodium Hydroxide	2 mg/m ³	CEIL	ACGIH
	2 mg/m ³	PEL	OSHA
	2 mg/m ³	CEIL	NIOSH

TWA	Time Weighted Average over 8 hours of work.
TLV	Threshold Limit Value over 8 hours of work.
REL	Recommended Exposure Limit.
PEL	Permissible Exposure Limit.
STEL	Short term Exposure Limit during x minutes.
IDLH	Immediately Dangerous to Life or Health.
WEEL	Workplace Environmental Exposure Levels.
CEIL	Ceiling

Personal Protection

Eyes	Wear Chemical safety glasses or goggles.
Inhalation	Provide local exhaust, preferably mechanical. If exposure levels are excessive, use an approved respirator.
Skin	Wear nitrile or rubber gloves, apron or lab coat.

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Other	Not Available
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Other Recommendations

Provide eyewash stations, quick-drench showers and washing facilities accessible to areas of use and handling.

Section 9 - Physical and Chemical Properties

Appearance (physical state, color, etc.)	Colorless liquid
Oder	Odorless
Oder threshold	Not Available
PH	14
Melting point/freezing point	-12-10° C (10-50° F)
Initial boiling point and boiling range	105-140° C (221-284° F)
Flash point	Not Flammable
Evaporation rate	Not Available
Flammability (solid, gas)	Not Flammable
Upper/lower flammability or explosive limit	Not Explosive
Vapor pressure	<24 hPa (<18 mmHg) at -20° C (68° F)
Vapor density	1.38 (air=1)
Density	1.38 g/cm ³
Solubility (ies)	Soluble in water
Partition coefficient: n-octanol/water	Not Available
Auto-ignition temperature	Not Applicable
Decomposition temperature	Not Available


Section 10 - Stability and Reactivity

Chemical Stability	Stable
Possibility of Hazardous Reactions	Will not occur
Conditions to Avoid	Not Available
Incompatible Materials	Acids, organic materials, chlorinated solvents, aluminum, phosphorous, zinc, tin
Hazardous Decomposition Products	Sodium oxides

Section 11 – Toxicological Information

Acute Toxicity

Skin	Not Available
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Eyes	Not Available
Respiratory	Not Available
Ingestion	Not Available

Carcinogenicity

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

Signs & Symptoms of Exposure

Skin	Extent of damage depends on duration of contact. Burning, itching, redness, inflammation or swelling of exposed tissues.
Eyes	Eye burns, watering eyes.
Respiratory	Burning, choking, coughing, wheezing, laryngitis, shortness of breath, headache, nausea.
Ingestion	Burning, choking, nausea, vomiting, severe pain.

Chronic Toxicity	Not Available
Teratogenicity	Not Available
Mutagenicity	Not Available
Embryotoxicity	Not Available
Specific Target Organ Toxicity	Not Available

Section 12 – Ecological Information

Ecotoxicity

Aquatic Vertebrate	Not Available
Aquatic Invertebrate	Not Available
Terrestrial	Not Available
Persistence and Degradability	Not Available
Bioaccumulative Potential	Not Available
Mobility in soil	Not Available
PBT and vPvB Assessment	Not Available
Other Adverse Effects	Not Available

Section 13 – Disposable Considerations

Waste Residues	User should review their operations in terms of the applicable federal/national or local regulations and consult with appropriate
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	regulatory agencies if necessary before disposing of waste product container or residue.
Product Containers	Users should review their operations in terms of the applicable federal/national or local regulations and consult with appropriate regulatory agencies if necessary before disposing of waste product container.

The information offered in section 13 is for the product as shipped. Use and/or alterations to the product may significantly change the characteristics of the material and alter the waste classification and proper disposal methods.

Section 14 – Transportation Information

US DOT	UN1824, Sodium hydroxide solution, 8, PG II
TDG	UN1824, SODIUM HYDROXIDE SOLUTION, 8, PG II
IMDG	UN1824, SODIUM HYDROXIDE SOLUTION, 8, PG II
Marine Pollutant	No
IATA/ICAO	UN1824, Sodium hydroxide solution, 8, PG II

Section 15 – Regulatory Information

TSCA Inventory Status	All ingredients are listed on the TSCA inventory
DSCL (EEC)	All ingredients are listed on the DSCL inventory
California Proposition 65	Not Listed
SARA 302	Not Listed
SARA 304	Not Listed
SARA 311	Acute Health Hazard
SARA 312	Acute Health Hazard
SARA 313	Not Listed
WHMIS Canada	Class E: Corrosive material