



MATERIAL SAFETY DATA SHEET

1. Product and Company Identification

Material name SODIUM HYDROXIDE
Version # 09
Revision date 09-February-2009
Chemical description Pellet
CAS # 1310-73-2
Synonym(s) CAUSTIC SODA
Manufacturer CETCO
Construction Drilling Products
2870 Forbs Avenue
Hoffman Estates, IL 60192 US
safetydata@amcol.com
<http://www.constructiondrilling.com/>
General Information (800) 527-9948
CHEMTREC® (800) 424-9300

2. Hazards Identification

Emergency overview Contact with this material will cause burns to the skin, eyes and mucous membranes. Highly flammable.

Potential health effects

Eyes Substance causes severe eye irritation; injury may be permanent. Liquid, aerosols and vapors of this product are irritating and can cause pain, tearing, reddening and swelling accompanied by a stinging sensation and/or a feeling like that of fine dust in the eyes.

Skin Contact may irritate or burn skin. Immediately corrosive; causes permanent skin damage.

Inhalation Inhalation of vapors or mists of the product may be irritating to the respiratory system. Inhaled corrosive substances can lead to a toxic edema of the lungs.

Ingestion Corrosive and may cause severe and permanent damage to mouth, throat, and stomach. Ingestion of this product may cause nausea, vomiting and diarrhea. Aspiration into lungs may cause chemical pneumonia and lung damage.

3. Composition / Information on Ingredients

Components	CAS #	Percent
SODIUM HYDROXIDE	1310-73-2	90 - 100

4. First Aid Measures

First aid procedures

Eye contact Immediately flush eyes with plenty of water for at least 20 minutes. Keep eye wide open while rinsing. Get medical attention.

Skin contact Immediately flush skin with running water for at least 20 minutes. Remove and isolate contaminated clothing and shoes. Launder contaminated clothing before reuse. Get medical attention immediately.

Inhalation If gas/fume/vapor/dust/mist from the material is inhaled, remove the affected person immediately to fresh air. If not breathing, give artificial respiration or give oxygen by trained personnel. Get medical attention immediately.

Ingestion If swallowed, rinse mouth with water (only if the person is conscious). Immediately give large quantities of water to drink. If swallowed, do NOT induce vomiting. Call a physician immediately.

Notes to physician Provide general supportive measures and treat symptomatically.

5. Fire Fighting Measures

Flammable properties This material will not burn.

Extinguishing media

Suitable extinguishing media Use water to cool fire-exposed containers and to protect personnel. Water only; no dry chemical, CO2 or Halon.

Unsuitable extinguishing media Carbon dioxide (CO2).

Hazardous combustion products None known.

6. Accidental Release Measures

Personal precautions Do not touch damaged containers or spilled material unless wearing appropriate protective clothing.

Environmental precautions Runoff from fire control or dilution water may be corrosive and/or toxic and cause pollution.

Methods for containment Stop leak if you can do so without risk. Prevent entry into waterways, sewers, basements or confined areas.

Methods for cleaning up Use a non-combustible material like vermiculite, sand or earth to soak up the product and place into a container for later disposal. Avoid runoff into storm sewers and ditches which lead to waterways.

7. Handling and Storage

Handling Do not get this material in your eyes, on your skin, or on your clothing. Do not breathe fumes or dust from this material.

Use this product with adequate ventilation. Wash hands after handling and before eating. Wash hands before eating. Avoid breathing dust.

Storage Keep the container tightly closed and dry. Store away from water, steam, ice, heat, oxidizing agents, and acids. Keep this material away from food, drink and animal feed.

8. Exposure Controls / Personal Protection

Occupational exposure limits

ACGIH

Material	Type	Value
SODIUM HYDROXIDE (1310-73-2)	TWA	2 mg/m3

U.S. - OSHA

Material	Type	Value
SODIUM HYDROXIDE (1310-73-2)	Ceiling	2 mg/m3
	PEL	2 mg/m3

Engineering controls Ensure compliance with applicable exposure limits. Use process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below recommended exposure limits.

Personal protective equipment

Eye / face protection Wear chemical goggles. Provide an emergency eye wash fountain and quick drench shower in the immediate work area.

Skin protection Wear appropriate chemical resistant clothing. The use of neoprene gloves is recommended. Launder contaminated clothing before reuse.

Respiratory protection When workers are facing concentrations above the exposure limit they must use appropriate certified respirators.

9. Physical & Chemical Properties

Appearance Pellets.

Color White.

Odor None.

Odor threshold Not available.

Physical state Solid.

Form Not available.

pH	12, conc: 0.05% (solution); 13, conc: 1% (solution); 14, conc: 5% (solution)
Melting point	613.4 °F (323 °C)
Freezing point	613.4 °F (323 °C)
Boiling point	2530.4 °F (1388 °C)
Flash point	Not available.
Evaporation rate	Not available.
Flammability	Not available.
Flammability limits in air, upper, % by volume	Not available.
Flammability limits in air, lower, % by volume	Not available.
Vapor pressure	0.1333 kPa at 739°C
Vapor density	Not available.
Specific gravity	2.13
Relative density	2.1298 g/cm ³ estimated
Solubility (water)	1110 g/l
Partition coefficient (n-octanol/water)	Not available.
Auto-ignition temperature	Not available.
Decomposition temperature	Not available.
Bulk density	1.1 - 1.25 g/cm ³ at 20 °C
Molecular weight	40.0000 g/mol
Molecular formula	H-Na-O

10. Chemical Stability & Reactivity Information

Chemical stability	Stable at normal conditions.
Conditions to avoid	Exposure to air or moisture over prolonged periods.
Incompatible materials	Reaction with water may generate much heat which will increase the concentration of fumes in the air. This product reacts with acids. This product may react with metals, halogens.
Hazardous decomposition products	None known.
Possibility of hazardous reactions	Will not occur.

11. Toxicological Information

Toxicological data

Product

SODIUM HYDROXIDE (1310-73-2)

Test Results

Acute LD50 Mouse: 40 mg/kg
 Acute Dermal Rabbit: 500 mg/day
 Acute Dermal LD50 Rabbit: 1350 mg/kg
 Acute Other LD50 Mouse: 40 mg/kg

Acute effects Acute LD50: 40 mg/kg, Mouse
 500 mg/day

Chronic effects Not available.

12. Ecological Information

Ecotoxicological data

Product

SODIUM HYDROXIDE (1310-73-2)

Test Results

EC50 Water flea (Ceriodaphnia dubia): 34.59 - 47.13 mg/l
 48.00 Hours
 LC50 Fish: 45.4 mg/L 96.00 Hours

Persistence and degradability Not available.

13. Disposal Considerations

Disposal instructions Dispose in accordance with all applicable regulations.

14. Transport Information

DOT

Basic shipping requirements:

UN number	UN1823
Proper shipping name	Sodium hydroxide, solid
Hazard class	8
Packing group	II

Additional information:

Special provisions	IB8, IP2, IP4, T3, TP33
Packaging exceptions	154
Packaging non bulk	212
Packaging bulk	240
Reportable quantity	1000
ERG number	154



DOT

IATA

Basic shipping requirements:

Proper shipping name	Sodium hydroxide, solid
Hazard class	8
UN number	1823
Packing group	II

Additional information:

Packaging instructions cargo only	816
Maximum net quantity packaging	15 kg
Maximum net quantity packaging cargo only	50 kg
ERG code	8L



IATA

IMDG

Basic shipping requirements:

Proper shipping name	SODIUM HYDROXIDE, SOLID
Hazard class	8
UN number	1823
Packing group	II



IMDG

15. Regulatory Information

US federal regulations OSHA Process Safety Standard: This material is not known to be hazardous by the OSHA Highly Hazardous Process Safety Standard, 29 CFR 1910.119.

CERCLA (Superfund) reportable quantity

SODIUM HYDROXIDE: 1000.0000

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories
 Immediate Hazard - Yes
 Delayed Hazard - Yes
 Fire Hazard - No
 Pressure Hazard - No
 Reactivity Hazard - No

Section 302 extremely hazardous substance No

Section 311 hazardous chemical Yes

Clean Water Act (CWA) Hazardous substance

Food and Drug Administration (FDA)
 Total food additive
 Direct food additive
 GRAS food additive

Inventory status

Country(s) or region	Inventory name	On inventory (yes/no)*
Australia	Australian Inventory of Chemical Substances (AICS)	Yes
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-Domestic Substances List (NDSL)	No
China	Inventory of Existing Chemical Substances in China (IECSC)	Yes
Europe	European Inventory of New and Existing Chemicals (EINECS)	Yes
Europe	European List of Notified Chemical Substances (ELINCS)	No
Japan	Inventory of Existing and New Chemical Substances (ENCS)	Yes
Korea	Existing Chemicals List (ECL)	Yes
New Zealand	New Zealand Inventory	Yes
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	Yes
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)

State regulations

US - Pennsylvania RTK - Hazardous Substances: Listed substance

SODIUM HYDROXIDE (1310-73-2) Listed.

16. Other Information

HMIS ratings

HEALTH	*	3
FLAMMABILITY		0
PHYSICAL HAZARD		0
PERSONAL PROTECTION		

NFPA ratings

Health: 3
Flammability: 0
Instability: 0

Disclaimer

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The manufacturer expressly does not make any representations, warranties, or guarantees as to its accuracy, reliability or completeness nor assumes any liability, for its use. It is the user's responsibility to verify the suitability and completeness of such information for each particular use.

Third party materials: Insofar as materials not manufactured or supplied by this manufacturer are used in conjunction with, or instead of this product, it is the responsibility of the customer to obtain, from the manufacturer or supplier, all technical data and other properties relating to these and other materials and to obtain all necessary information relating to them. No liability can be accepted in respect of the use of this product in conjunction with materials from another supplier.

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