An ISO9001 Certified Company

Material Safety Data Sheet
Doctors Solution

Section 1 - Chemical Product and Company Identification

MSDS Name:
Doctors Solution
Catalog Numbers:
LC13690
Synonyms:
Sodium plumbite solution (ASTM D4952)

Section 2 – Composition, Information on Ingredients

CAS#	Chemical Name:	Percent
7732-18-5	Water	>84
1317-36-8	Lead monoxide	<3
1310-73-2	Sodium hydroxide	12.5

Section 3 - Hazards Identification

Emergency Overview

Appearance: *Clear, colorless solution*
Danger! Causes severe skin burns and eye damage. May damage fertility or the unborn child. May cause damage to the kidneys and central nervous system through prolonged or repeated exposure. Harmful to aquatic life with long lasting effects. Suspected of causing cancer.
Target Organs: *Eyes, skin, respiratory tract, gastrointestinal tract, blood, kidneys, central nervous system, reproductive system*

Potential Health Effects

Eye:
Causes eye burns.
Skin:
Causes skin burns. May be harmful if absorbed through the skin.

Ingestion:
Causes gastrointestinal tract burns with nausea, vomiting, and diarrhea. May cause kidney damage. Ingestion of large quantities may cause central nervous system depression, severe hemolytic anemia, and hemoglobinuria.

Inhalation:
Causes chemical burns to the respiratory tract. May be harmful if inhaled. May cause effects similar to those of ingestion.

Chronic:
Prolonged or repeated skin contact may cause dermatitis. Prolonged or repeated exposure may cause adverse reproductive effects or visual disturbances.

Section 4 - First Aid Measures

Eyes:
Flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical aid at once. Do NOT allow victim to rub or keep eyes closed.

Skin:
Flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Get medical aid at once. Wash clothing before reuse.

Ingestion:
Call a poison control center. Do not induce vomiting unless directed to do so by medical personnel. If victim is conscious and alert, give 2-4 cupfuls of milk or water. Never give anything by mouth to an unconscious person. Get medical aid at once.

Inhalation:
Remove from exposure and move to fresh air immediately. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical aid.

Notes to Physician:
The use of a metal chelator should be determined only by qualified medical personnel.

Section 5 - Fire Fighting Measures

General Information:
As in any fire, wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear. During a fire, irritating and highly toxic gases may be generated by thermal decomposition or combustion. Contact with metals may evolve flammable hydrogen gas.

Extinguishing Media:
For small fires, use dry chemical, carbon dioxide, or alcohol-resistant foam.

Autoignition Temperature:
Not applicable.

Flash Point:
Not applicable.

NFPA Rating:
Health- 3, Flammability- 0, Instability- 0.

Explosion Limits:
Lower: n/a Upper: n/a

Section 6 - Accidental Release Measures

General Information:

Use proper personal protective equipment as indicated in Section 8.

Spills/Leaks:

Absorb spills with inert material (vermiculite, sand, fuller's earth) and place in suitable container labeled for later disposal. Material may be carefully neutralized to pH 7 with citric acid or other suitable neutralizing agent.

Section 7 - Handling and Storage

Handling:

Do not get in eyes, on skin, or on clothing. Do not ingest or inhale. Use only with adequate ventilation.

Storage:

Store tightly closed in a cool, dry, well-ventilated area away from incompatible materials.

Section 8 - Exposure Controls, Personal Protection

Engineering Controls:

Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower. Use adequate ventilation to keep airborne concentrations below the Permissible Exposure Limits.

Exposure Limits:

Chemical Name:	ACGIH	NIOSH	OSHA
Water	none listed	none listed	none listed
Lead monoxide	0.05 mg/m3 TWA (as Pb) (listed under Lead, inorganic compounds)	0.05 mg/m3 TWA (as Pb) (listed under Lead, inorganic compounds)	0.050 mg/m3 TWA (as Pb) (listed under Lead, inorganic compounds)
Sodium hydroxide	2 mg/m3 Ceiling	2 mg/m3 Ceiling 10 mg/m3 IDLH	2 mg/m3 TWA

OSHA Vacated PELs:

None listed.

Personal Protective Equipment

Eyes:

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:

Wear appropriate gloves to prevent skin exposure.

Clothing:

Wear appropriate protective clothing to prevent skin exposure.

Respirators:

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.

Section 9 - Physical and Chemical Properties

Physical State:	Liquid
Color:	Colorless
Odor:	Odorless
pH:	Strongly basic (>11.5)
Vapor Pressure:	Not available
Vapor Density:	Not available
Evaporation Rate:	Not available
Viscosity:	Not available
Boiling Point:	Not available
Freezing/Melting Point:	Not available
Decomposition Temperature:	Not available
Solubility in water:	Soluble
Specific Gravity/Density:	1.11 – 1.14
Molecular Formula:	Not applicable
Molecular Weight:	Not applicable

Section 10 - Stability and Reactivity

Chemical Stability:
Stable under normal temperatures and pressures.

Conditions to Avoid:
Incompatible materials, excess heat.

Incompatibilities with Other Materials:
Metals, strong oxidizing agents, acids, chlorinated solvents, powdered aluminum.

Hazardous Decomposition Products:
Lead, lead oxides, sodium oxide.

Hazardous Polymerization:
Has not been reported.

Section 11 - Toxicological Information

RTECS:
CAS# 7732-18-5: ZC0110000.
CAS# 1317-36-8: OG1750000.
CAS# 1310-73-2: WB4900000.

LD50/LC50:
CAS# 7732-18-5:
Oral, rat: LD50 = >90 mL/kg.
CAS# 1317-36-8:
Draize test, rabbit, skin: 100mg/24H Mild
CAS# 1310-73-2:
Draize test, rabbit, skin: 500mg/24H Severe
Draize test, rabbit, eye: 1mg/24H Severe

Carcinogenicity:
CAS# 7732-18-5: Not listed as a carcinogen by ACGIH, IARC, NIOSH, NTP, OSHA, or CA Prop 65.

CAS# 1317-36-8: Listed as a carcinogen by NTP (Reasonably Anticipated), IARC (2B), and California Proposition 65.
CAS# 1310-73-2: Not listed as a carcinogen by ACGIH, IARC, NIOSH, NTP, OSHA, or CA Prop 65.

Epidemiology:
No information found

Teratogenicity:
No information found

Reproductive:
See actual entry in RTECS for complete information.

Mutagenicity:
No information found

Neurotoxicity:
No information found

Section 12 - Ecological Information

Do not empty into drains.

Section 13 - Disposal Considerations

Dispose of in accordance with Federal, State, and local regulations.

Section 14 - Transport Information

US DOT

Shipping Name: Sodium hydroxide solution
Hazard Class: 8
UN Number: UN1824
Packing Group: PGII

Section 15 - Regulatory Information

US Federal

TSCA:
CAS# 7732-18-5 is listed on the TSCA Inventory.
CAS# 1317-36-8 is listed on the TSCA Inventory.
CAS# 1310-73-2 is listed on the TSCA Inventory.

SARA Reportable Quantities (RQ):
CAS# 1310-73-2: final RQ = 1000 pounds (454 kg)

CERCLA/SARA Section 313:
Not reportable under Section 313.

OSHA - Highly Hazardous:
None of the chemicals in this product are considered highly hazardous by OSHA.

US State

State Right to Know:

Sodium hydroxide can be found on the following state Right-to-Know lists: California, New Jersey, Pennsylvania, Minnesota, Massachusetts.

Lead monoxide can be found on the following state Right-to-Know lists: California, New Jersey, Pennsylvania, Minnesota, Massachusetts.

California Regulations:

WARNING: This product contains a chemical known to the state of California to cause cancer, birth defects, or other reproductive harm.

European/International Regulations

Canadian DSL/NDSL:

CAS# 7732-18-5 is listed on Canada's DSL List.
CAS# 1317-36-8 is listed on Canada's DSL List.
CAS# 1310-73-2 is listed on Canada's DSL List.

Canada Ingredient Disclosure List:

CAS# 7732-18-5 is not listed on Canada's Ingredient Disclosure List.
CAS# 1317-36-8 is listed on Canada's Ingredient Disclosure List.
CAS# 1310-73-2 is listed on Canada's Ingredient Disclosure List.

Section 16 - Other Information

MSDS Creation Date: February 13, 1998
Revision Date: January 10, 2013

Information in this MSDS is from available published sources and is believed to be accurate. No warranty, express or implied, is made.