

**Safety Data Sheet**

according to 29CFR1910/1200 and GHS Rev. 3

**Initial preparation date:** : 10.24.2014**Hexamethylenediamine, 0.5M****SECTION 1: Identification of the substance/mixture and of the supplier****Product name:** Hexamethylenediamine, 0.5M**Manufacturer/Supplier Article number:** S25349**Recommended uses of the product and restrictions on use:** Laboratory**Manufacturer Details:**

AquaPhoenix Scientific  
860 Gitts Run Road,  
Hanover, PA 17331  
(717) 632-1291

**Supplier Details:**

Fisher Science Education  
6771 Silver Crest Road, Nazareth, PA 18064  
800 955-1177

**Emergency telephone number:**

Emergency Telephone No.: 800-255-3924

**SECTION 2: Hazards identification****Classification of the substance or mixture:****Corrosive**

Skin corrosion, category 1A  
Serious eye damage, category 1

Skin Corrosion Category 1A.  
Eye Damage 1.

**Signal word:** Danger**Hazard statements:**

Causes severe skin burns and eye damage.  
Causes serious eye damage.

**Precautionary statements:**

If medical advice is needed have product container or label at hand.  
Keep out of reach of children.  
Read label before use.  
Do not breathe dust/fume/gas/mist/vapors/spray.  
Wash skin thoroughly after handling.  
Wear protective gloves/protective clothing/eye protection/face protection.  
IF ON SKIN: Wash with soap and water.  
IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.  
If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do.  
Continue rinsing.  
If inhaled: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Immediately call a poison center or doctor/physician.  
Immediately remove/take off all contaminated clothing.  
Wash contaminated clothing before reuse.  
Store locked up.  
Dispose of contents and container as instructed in Section 13.

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Other Non-GHS Classification: None

**SECTION 3: Composition/information on ingredients****Ingredients:**

Ingredients:		
CAS 124-09-4	Hexamethylenediamine	6 %
CAS 7732-18-5	Deionized Water	92.29 %
CAS 1310-73-2	Sodium Hydroxide	2 %
Percentages are by weight		

**SECTION 4: First aid measures****Description of first aid measures****After inhalation:**

Loosen clothing as necessary and position individual in a comfortable position. Move exposed to fresh air. Give artificial respiration if necessary. If breathing is difficult give oxygen. Get medical assistance if cough or other symptoms appear.

**After skin contact:**

Rinse/flush exposed skin gently using soap and water for 15-20 minutes. Seek medical advice if discomfort or irritation persists.

**After eye contact:**

Protect unexposed eye. Rinse/flush exposed eye(s) gently using water for 15-20 minutes. Remove contact lens(es) if able to do so during rinsing. Seek medical attention if irritation persists or if concerned.

**After swallowing:**

Rinse mouth thoroughly. Do not induce vomiting. Seek medical attention if irritation, discomfort, or vomiting persists. Never give anything by mouth to an unconscious person.

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

Irritation. Headache. Nausea. Shortness of breath.

**Indication of any immediate medical attention and special treatment needed:**

If seeking medical attention provide SDS document to physician. Physician should treat symptomatically.

**SECTION 5: Firefighting measures****Extinguishing media****Suitable extinguishing agents:**

Use water, dry chemical, chemical foam, carbon dioxide, or alcohol-resistant foam.

**Unsuitable extinguishing agents: None****Special hazards arising from the substance or mixture:**

Thermal decomposition can lead to release of irritating gases and vapors.

**Advice for firefighters:****Protective equipment:**

Wear protective eyewear, gloves, and clothing. Use NIOSH-approved respiratory protection/breathing apparatus. Refer to Section 8.

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Avoid inhaling gases, fumes, dust, mist, vapor, and aerosols. Avoid contact with skin, eyes and clothing.

**SECTION 6: Accidental release measures****Personal precautions, protective equipment and emergency procedures:**

Ensure adequate ventilation. Ensure that air-handling systems are operational.

**Environmental precautions:**

Should not be released into environment. Prevent from reaching drains, sewer, or waterway.

**Methods and material for containment and cleaning up:**

Wear protective eyewear, gloves, and clothing. Always obey local regulations. Containerize for disposal. Refer to Section 13. Refer to Section 8. If necessary use trained response staff or contractor. Evacuate personnel to safe areas. Keep in suitable closed containers for disposal.

**Reference to other sections:** None**SECTION 7: Handling and storage****Precautions for safe handling:**

Avoid contact with skin, eyes and clothing. Follow good hygiene procedures when handling chemical materials. Refer to Section 8. Follow proper disposal methods. Do not eat, drink, smoke, or use personal products when handling chemical substances. Refer to Section 13.

**Conditions for safe storage, including any incompatibilities:**

Store in a cool location. Keep away from food and beverages. Protect from freezing and physical damage. Provide ventilation for containers. Keep container tightly closed. Store away from incompatible materials.

**SECTION 8: Exposure controls/personal protection****Control parameters:**100-97-0, Hexamethylenetetramine,, ACGIH TLV: 1mg/m<sup>3</sup>.  
1310-73-2, Sodium Hydroxide, ACGIH TLV: 2 mg/m<sup>3</sup>, OSHA PEL: 2 mg/m<sup>3</sup>  
TWA, NIOSH: 10 mg/m<sup>3</sup> IDLH.**Appropriate engineering controls:**

Emergency eye wash fountains and safety showers should be available in the immediate vicinity of use or handling. Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapor and mists below the applicable workplace exposure limits (Occupational Exposure Limits-OELs) indicated above.

**Respiratory protection:**

Not required under normal conditions of use. Where risk assessment shows air-purifying respirators are appropriate use a full-face particle respirator type N100 (US) or type P3 (EN 143) respirator cartridges as a backup to engineering controls. When necessary use NIOSH approved breathing equipment.

**Protection of skin:**

Select glove material impermeable and resistant to the substance. Select glove material based on rates of diffusion and degradation. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Use proper glove removal technique without touching outer surface. Avoid skin contact with used gloves. Wear protective clothing.

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**Eye protection:** Wear equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU). Safety glasses or goggles are appropriate eye protection.

**General hygienic measures:** Perform routine housekeeping. Wash hands before breaks and at the end of work. Avoid contact with skin, eyes and clothing. Before re-wearing, wash contaminated clothing.

**SECTION 9: Physical and chemical properties**

<b>Appearance (physical state, color):</b>	Clear, colorless liquid	<b>Explosion limit lower:</b>	Not determined
		<b>Explosion limit upper:</b>	Not determined
<b>Odor:</b>	Fishy ammonical	<b>Vapor pressure at 20°C:</b>	3 mmHg @ 60°C
<b>Odor threshold:</b>	Not determined	<b>Vapor density:</b>	3.8
<b>pH-value:</b>	Not determined	<b>Relative density:</b>	Not determined
<b>Melting/Freezing point:</b>	41°C	<b>Solubilities:</b>	Soluble.
<b>Boiling point/Boiling range:</b>	204°C	<b>Partition coefficient (n-octanol/water):</b>	Not determined
<b>Flash point (closed cup):</b>	Not determined	<b>Auto/Self-ignition temperature:</b>	Not determined
<b>Evaporation rate:</b>	Not determined	<b>Decomposition temperature:</b>	Not determined
<b>Flammability (solid, gaseous):</b>	Not determined	<b>Viscosity:</b>	a. Kinematic: Not determined b. Dynamic: Not determined
<b>Density at 20°C:</b>	Not determined		

**SECTION 10: Stability and reactivity****Reactivity:**

Nonreactive under normal conditions.

**Chemical stability:**

Stable under normal conditions.

**Possible hazardous reactions:**

None under normal processing.

**Conditions to avoid:**

Incompatible materials.

**Incompatible materials:** None

**Hazardous decomposition products:** None

**SECTION 11: Toxicological information**

**Acute Toxicity:** No additional information.

**Chronic Toxicity:** No additional information.

**Skin corrosion/irritation:** No additional information.

**Serious eye damage/irritation:** No additional information.

**Respiratory or skin sensitization:** No additional information.

**Carcinogenicity:** No additional information.

**Germ cell mutagenicity:** No additional information.

**Reproductive Toxicity:** No additional information.

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No additional information.

**SECTION 12: Ecological information****Ecotoxicity:** No additional information.**Persistence and degradability:** No additional information.**Bioaccumulative potential:** No additional information.**Mobility in soil:** No additional information.**Other adverse effects:** No additional information.**SECTION 13: Disposal considerations****Waste disposal recommendations:**

Contact a licensed professional waste disposal service to dispose of this material. Dispose of empty containers as unused product. Product or containers must not be disposed with household garbage. It is the responsibility of the waste generator to properly characterize all waste materials according to applicable regulatory entities (US 40CFR262.11). 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 waste regulations. Ensure complete and accurate classification.

**SECTION 14: Transport information****US DOT****UN Number:**

ADR, ADN, DOT, IMDG, IATA 1783

**Limited Quantity Exception:**

None

**Bulk:****RQ (if applicable):** None**Proper shipping Name:**

HEXAMETHYLENEDIAMINE SOLUTION.

**Hazard Class:** 8**Packing Group:** II.**Marine Pollutant (if applicable):** No additional information.**Comments:** None**Non Bulk:****RQ (if applicable):** None**Proper shipping Name:**

HEXAMETHYLENEDIAMINE SOLUTION.

**Hazard Class:** 8**Packing Group:** II.**Marine Pollutant (if applicable):** No additional information.**Comments:** None**SECTION 15: Regulatory information****United States (USA)****SARA Section 311/312 (Specific toxic chemical listings):**

None of the ingredients are listed.

**SARA Section 313 (Specific toxic chemical listings):**

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None of the ingredients are listed.

**RCRA (hazardous waste code):**

None of the ingredients are listed.

**TSCA (Toxic Substances Control Act) :**

All ingredients are listed.

**CERCLA (Comprehensive Environmental Response, Compensation, and Liability Act):**

1310-73-2 Sodium Hydroxide 1000 lbs.

**Proposition 65 (California):****Chemicals known to cause cancer:**

None of the ingredients are listed.

**Chemicals known to cause reproductive toxicity for females:**

None of the ingredients are listed.

**Chemicals known to cause reproductive toxicity for males:**

None of the ingredients are listed.

**Chemicals known to cause developmental toxicity:**

None of the ingredients are listed.

**Canada****Canadian Domestic Substances List (DSL) :**

All ingredients are listed.

**SECTION 16: Other information**

This product has been classified in accordance with hazard criteria of the Controlled Products Regulations and the SDS contains all the information required by the Controlled Products Regulations. Note. The responsibility to provide a safe workplace remains with the user. The user should consider the health hazards and safety information contained herein as a guide and should take those precautions required in an individual operation to instruct employees and develop work practice procedures for a safe work environment. The information contained herein is, to the best of our knowledge and belief, accurate. However, since the conditions of handling and use are beyond our control, we make no guarantee of results, and assume no liability for damages incurred by the use of this material. It is the responsibility of the user to comply with all applicable laws and regulations applicable to this material.

**NFPA:** 2-0-0**HMIS:** 2-0-0**GHS Full Text Phrases:** None**Abbreviations and Acronyms:**

IMDG	International Maritime Code for Dangerous Goods.
IATA	International Air Transport Association.
GHS	Globally Harmonized System of Classification and Labelling of Chemicals.
ACGIH	American Conference of Governmental Industrial Hygienists
CAS	Chemical Abstracts Service (division of the American Chemical Society).
NFPA	National Fire Protection Association (USA).
HMIS	Hazardous Materials Identification System (USA).
WHMIS	Workplace Hazardous Materials Information System (Canada).

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- DNEL Derived No-Effect Level (REACH).
- PNEC. Predicted No-Effect Concentration (REACH).
- CFR Code of Federal Regulations (USA)
- SARA Superfund Amendments and Reauthorization Act (USA).
- RCRA. Resource Conservation and Recovery Act (USA).
- TSCA. Toxic Substances Control Act (USA).
- NPRI National Pollutant Release Inventory (Canada).
- DOT US Department of Transportation.