



## Hexamethylenetetramine

### 1. Identification

**Product Name:** Hexamethylenetetramine

**Item #:** MA0101124, RW0580

**Web SDS:** S404

**Synonyms:** Urotropine, Hexamine, Methenamine, 1,3,5,7-Tetraazatricyclo(3.3.1.1.3.7)decane

**Recommended Use:** Laboratory Reagent

**Restrictions on Use:** Any use other than recommended

**Manufacturer:**

**In Case of Emergency:**

BBC Biochemical  
409 Eleanor Lane,  
Mount Vernon, WA 98273  
1-800-635-4477

Chemtrec US 1-800-424-9300  
Chemtrec International 703-527-3887

### 2. Hazards Identification

**OSHA Hazard Classification(s):**

Acute Toxicity - Oral - Category 4

Germ Cell Mutagenicity - Category 2

Flammable Solids - Category 2

**Signal Word:** Warning

**Hazard Statement(s):** Harmful if swallowed. Suspect of causing genetic defects. Flammable solid.

**Pictogram(s):**



**Precautionary Statement(s):** Prevention: Wash body thoroughly after handling. Do not eat, drink or smoke when using this product. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Wear protective gloves, protective clothing, eye protection and face protection. Keep away from heat sources and open flame. No smoking. Ground/bond container and receiving equipment. Use explosion-proof electrical, ventilating, lighting and equipment. Wear protective gloves, eye protection, face protection.

Response: If swallowed: Call a doctor if you feel unwell. Rinse mouth. If exposed or concerned: Get medical attention. In case of fire: Use water, dry chemical, CO2 or foam to extinguish.

Storage: Store locked up.

Disposal: Dispose of contents/container in accordance with local regulations.

**Descriptions of Hazards not otherwise classified:** N/A

**Percent of mixture with unknown acute toxicity:** N/A

### 3. Composition and Information on Ingredients

Chemical Name	Common Name	CAS #	Concentration %
Hexamethylenetetramine		100-97-0	100

### 4. First Aid Measures

**Eye Contact:** If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.

**Skin Contact:** If on skin (or hair): Take off immediately all contaminated clothing and wash before reuse. Wash with plenty of water. If skin irritation occurs: Get medical advice/attention.

**Inhalation:** Remove to fresh air; give artificial respiration if breathing has stopped. Get medical advice/attention if you feel unwell.

**Ingestion:** Do not induce vomiting. If vomiting occurs spontaneously, keep head below hips to prevent aspiration of liquid into the lungs. Get medical attention.

**Symptoms:** Irritation eyes, nose, throat; headache, dizziness



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**Recommendations for immediate medical care/special treatment:** Get medical advice/attention if you feel unwell.

### 5. Fire- Fighting Measures

**Extinguishing Media:** Dry chemical, carbon dioxide, alcohol foam, water. Use water spray to cool fire-exposed containers and disperse vapors.

**Fire Hazards (Chemical):** OSHA classified Flammable Solid

**Special Protective Equipment:** Fire fighters should use self-contained breathing apparatus and protective clothing.

**Precautions for Firefighters:** Carbon monoxide and unidentified organic compounds may be formed during combustion. Vapors can travel distances to ignition source and flash back. Cool fire exposed containers with water. Fine mist or spray may be flammable at temperatures below the flash point. When heated above the flash point this material emits flammable vapors which, when mixed with air, can burn or be explosive.

### 6. Accidental Release Measures

**Emergency Procedures:** Evacuate the area of all unnecessary personnel. Wear suitable protective equipment. Eliminate all sources of ignition and provide ventilation.

**Protective Equipment:** See section 8

**Environmental Precautions:** Prevent release to the environment by using barriers.

**Containment and Clean-Up Procedures:** Use barriers to prevent spreading. Collect spill in container. Call waste authorities.

### 7. Handling and Storage

**Handling:** Do not breathe vapors. Do not eat, drink or smoke when using this product. Keep away from heat, sparks, open flames, hot surfaces. Keep container tightly closed. Ground/Bond container and receiving equipment. Use explosion-proof electrical, ventilating, and lighting equipment. Use only non-sparking tools. Take precautionary measures against static discharge.

**Storage:** Store locked up. Store in a cool, well-ventilated place. Keep container tightly sealed when not in use. Store at room temperature. Store away from heat, flame, sources of ignition. Hygroscopic.

### 8. Exposure Controls/Personal Protection

**OSHA Permissible Exposure Limits (PELs):**

Reagent	CAS #	OSHA PEL TWA
N/A		

**ACGIH Threshold Limit Values (TLVs):**

Reagent	CAS #	ACGIH PEL TLV	ACGIH STEL
N/A			

**Engineering Controls:** Use in a well ventilated area to prevent exposure. Maintain eyewash fountain and quick-drench facilities in work areas.

**Personal Protective Measures:** Wear gloves, lab coat, eye protection and impervious footwear. Contact lenses should not be worn when working with this material.

**Special PPE Requirements:** If ventilation hood not available wear respirator.

### 9. Physical and Chemical Properties Section

**Appearance:** Colorless, Crystals

**Molecular Weight:** 140.1

**Molecular Formula:** C<sub>6</sub>H<sub>12</sub>N<sub>4</sub>

**pH:** N/A

**Boiling Point and Boiling Range:** N/A

**Melting Point/Freezing Point:** N/A

**Flash Point:** 250°C/ 482°F

**Specific Gravity/Relative Density:** 1.331g/cm<sup>3</sup>



## Hexamethylenetetramine

**Odor:** Ammoniacal  
**Odor Threshold:** N/A  
**Color:** Colorless  
**Flammability (solid/gas):** Flammable Solid  
**Vapor Density:** N/A  
**Upper/Lower flammability or explosive limits:** N/A  
**Vapor Pressure:** N/A  
**Evaporation Rate:** N/A  
**Partition Coefficient: n-octanol/water:** N/A  
**Viscosity:** N/A  
**Auto-ignition temperature:** N/A  
**Solubility:** Miscible with water  
**Decomposition Temperature:** N/A

### 10. Stability and Reactivity

**Reactivity:** Not Reactive  
**Chemical Stability:** Stable  
**Conditions of Stability/Instability:** Stable under normal conditions of temperature and pressure  
**Stabilizers needed:** None  
**Safety issue indicated by appearance change:** N/A  
**Other:** N/A  
**Hazardous Reactions:** N/A  
**Hazardous Polymerization:** Does not occur  
**Conditions to avoid:** Exposure to heat, sparks, sources of ignition.  
**Classes of Incompatible Materials:** Oxidizers, Strong Acids, Strong Bases  
**Hazardous Decomposition Products:** Thermal-oxidation degradation can produce oxides of carbon. Toxic gases and vapors (I.e. Carbon monoxide) may be released in a fire.

### 11. Toxicological Information

#### Likely Routes of Exposure

**Eyes:** Irritation.  
**Skin:** Irritation.  
**Inhalation:** Dizziness, headache.  
**Ingestion:** Nausea.

**Signs or Symptoms of Exposure:** Nausea.

**Effects from short term exposure (delayed, immediate, chronic):** Irritation to the eyes, nose, throat; headache, dizziness, nausea.

**Acute Toxicity (Numerical Measures):** LD50(oral,mouse)=569 mg/kg

**Carcinogenicity (NTP, IARC, OSHA):** Not listed as a known carcinogen.

### 12. Ecological Information

**Ecotoxicity:** Toxicity to fish: LC50-Pimephales promelas (fathead minnow)-49800mg/l-96h  
Toxicity to daphnia and other aquatic invertebrates: EC50-Daphnia magna (water flea)-36000mg/L-48h

**Persistence and degradability:** N/A

**Bioaccumulation Potential (octanol-water partition coefficient, BCF):** N/A

**Mobility in the soil:** N/A

**Adverse Environmental Effects:** N/A



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### 13. Disposal Considerations

**Recommended Disposal Containers:** Check with your local waste authorities\*

**Recommended Disposal Methods:** Do not dispose of in drains, check with your local waste authorities.\*

**Physical/Chemical Properties affecting Disposal:** See section 2 and section 9 applicable information.\*

**Special Precautions for Landfill and Incineration Activities:** Check with your local waste authorities.\*

**Waste Stream:** Consult your local or regional authorities.\*

### 14. Transport Information

**UN Number:** UN1328

**UN Proper Shipping Name:** Hexamethylenetetramine

**Transport Hazard Class(es):** 4.1

**Packing Group Number:** III

**Environmental Hazards (IMDG code):**

**Marine Pollutant:**

**Transport in Bulk (IBC Code):**

**Special Transport Precautions:**

### 15. Regulatory Information

**OSHA:** N/A

**DOT:** N/A

**EPA:** N/A

**CPSC:** N/A



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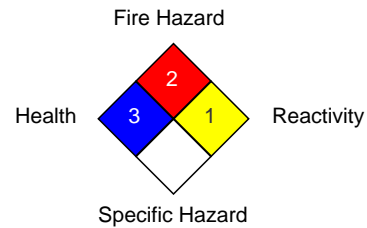
### 16. Other Information

Revision Date: 02/15/2016

#### NFPA

Health	3
Fire Hazard	2
Reactivity	1
Specific Hazard	

National Fire Protection Association (USA) NFPA



#### HMIS

Health	3
Flammability	2
Physical Hazard	1
Personal Protection	

Hazardous Material Information System HMIS

Health	3
Flammability	2
Physical Hazard	1
Personal Protection	

#### Notice to Reader:

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