



GARDENA, CA
NEW BRUNSWICK, NJ

Material Safety Data Sheet

NFPA	HMIS	Personal Protective Equipment						
	<table border="1"> <tr><td>Hazard Level</td><td style="text-align: center;">2</td></tr> <tr><td>Flam. Hazard</td><td style="text-align: center;">1</td></tr> <tr><td>Reactivity</td><td style="text-align: center;">0</td></tr> </table>	Hazard Level	2	Flam. Hazard	1	Reactivity	0	 See Section 15.
Hazard Level	2							
Flam. Hazard	1							
Reactivity	0							

Section 1. Chemical Product and Company Identification		Page Number: 1
Common Name/ Trade Name	HEXAMETHYLENETETRAMINE	17, M1217
Manufacturer	ProChem, Inc. 826 Roosevelt Rd Rockford, IL 61109	CAS# 100-97-0
		RTECS MN4725000
Commercial Name(s)	Hexamine	TSCA TSCA 8(b) inventory: Methenamine
Synonym	Hexamethylenetetramine	CI# Not available.
Chemical Name	Methenamine	IN CASE OF EMERGENCY CHEMTREC (24hr) 800-424-9300 CALL 815-398-1788
Chemical Family	Not available.	
Chemical Formula	C6H12N4	
Supplier		

Section 2. Composition and Information on Ingredients					
Name	CAS #	Exposure Limits			% by Weight
		TWA (mg/m ³)	STEL (mg/m ³)	CEIL (mg/m ³)	
1) Methenamine	100-97-0				100
Toxicological Data on Ingredients		Methenamine: ORAL (LD50): Acute: 569 mg/kg [Mouse].			

Section 3. Hazards Identification	
Potential Acute Health Effects	Hazardous in case of skin contact (irritant), of eye contact (irritant), of ingestion, of inhalation.
Potential Chronic Health Effects	CARCINOGENIC EFFECTS: Not available. MUTAGENIC EFFECTS: Mutagenic for bacteria and/or yeast. TERATOGENIC EFFECTS: Not available. DEVELOPMENTAL TOXICITY: Not available. Repeated or prolonged exposure is not known to aggravate medical condition.

Section 4. First Aid Measures

Eye Contact	Check for and remove any contact lenses. In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Cold water may be used. Get medical attention.
Skin Contact	In case of contact, immediately flush skin with plenty of water. Cover the irritated skin with an emollient. Remove contaminated clothing and shoes. Cold water may be used. Wash clothing before reuse. Thoroughly clean shoes before reuse. Get medical attention.
Serious Skin Contact	Wash with a disinfectant soap and cover the contaminated skin with an anti-bacterial cream. Seek immediate medical attention.
Inhalation	If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.
Serious Inhalation	Evacuate the victim to a safe area as soon as possible. Loosen tight clothing such as a collar, tie, belt or waistband. If breathing is difficult, administer oxygen. If the victim is not breathing, perform mouth-to-mouth resuscitation. Seek medical attention.
Ingestion	Do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. If large quantities of this material are swallowed, call a physician immediately. Loosen tight clothing such as a collar, tie, belt or waistband.
Serious Ingestion	Not available.

Section 5. Fire and Explosion Data

Flammability of the Product	Flammable.
Auto-Ignition Temperature	Not available.
Flash Points	CLOSED CUP: 250°C (482°F).
Flammable Limits	Not available.
Products of Combustion	These products are carbon oxides (CO, CO ₂), nitrogen oxides (NO, NO ₂ ...).
Fire Hazards in Presence of Various Substances	Slightly flammable to flammable in presence of open flames and sparks, of heat. Non-flammable in presence of shocks.
Explosion Hazards in Presence of Various Substances	Risks of explosion of the product in presence of mechanical impact: Not available. Risks of explosion of the product in presence of static discharge: Not available.
Fire Fighting Media and Instructions	Flammable solid. SMALL FIRE: Use DRY chemical powder. LARGE FIRE: Use water spray or fog. Cool containing vessels with water jet in order to prevent pressure build-up, autoignition or explosion.
Special Remarks on Fire Hazards	Not available.
Special Remarks on Explosion Hazards	Explosive reaction with acetic acid + acetic anhydride + ammonium nitrate + nitric acid, 1-bromopenta borane(9) above 90 C, iodoform (at 178 C), iodine (at 138 C).

Section 6. Accidental Release Measures

Small Spill	Use appropriate tools to put the spilled solid in a convenient waste disposal container.
Large Spill	Flammable solid. Stop leak if without risk. Do not touch spilled material. Use water spray curtain to divert vapor drift. Prevent entry into sewers, basements or confined areas; dike if needed. Eliminate all ignition sources. Call for assistance on disposal.

Section 7. Handling and Storage

Precautions	Keep locked up.. Keep away from heat. Keep away from sources of ignition. Ground all equipment containing material. Do not ingest. Do not breathe dust. Wear suitable protective clothing. In case of insufficient ventilation, wear suitable respiratory equipment. If ingested, seek medical advice immediately and show the container or the label. Avoid contact with skin and eyes. Keep away from incompatibles such as oxidizing agents.
Storage	Keep container in a cool, well-ventilated area. Keep container tightly closed and sealed until ready for use. Avoid all possible sources of ignition (spark or flame). Do not store above 25°C (77°F).

Section 8. Exposure Controls/Personal Protection

Engineering Controls	Use process enclosures, local exhaust ventilation, or other engineering controls to keep airborne levels below recommended exposure limits. If user operations generate dust, fume or mist, use ventilation to keep exposure to airborne contaminants below the exposure limit.
Personal Protection	Splash goggles. Lab coat. Dust respirator. Be sure to use an approved/certified respirator or equivalent. Gloves.
Personal Protection in Case of a Large Spill	Splash goggles. Full suit. Dust respirator. Boots. Gloves. A self contained breathing apparatus should be used to avoid inhalation of the product. Suggested protective clothing might not be sufficient; consult a specialist BEFORE handling this product.
Exposure Limits	Not available.

Section 9. Physical and Chemical Properties

Physical state and appearance	Solid. (Crystals solid. crystalline powder.)	Odor	Odorless.
Molecular Weight	140.19 g/mole	Taste	Not available.
pH (1 % soln/water)	Not available.	Color	White.
Boiling Point	Not available.		
Melting Point	Sublimation temperature: 280°C (536°F) [Lewis, R.T., Hawley's Condensed Chemical Dictionary] 263 C [Merck Index]		
Critical Temperature	Not available.		
Specific Gravity	1.331 @ -5 C (23 F) (Water = 1)		
Vapor Pressure	Not applicable.		
Vapor Density	4.9 (Air = 1)		
Volatility	Not available.		
Odor Threshold	Not available.		
Water/Oil Dist. Coeff.	Not available.		
Ionicity (in Water)	Not available.		
Dispersion Properties	See solubility in water.		
Solubility	Soluble in cold water. Insoluble in diethyl ether. Soluble in chloroform. Soluble in alcohol.		

Section 13. Disposal Considerations

Waste Disposal Waste must be disposed of in accordance with federal, state and local environmental control regulations.

Section 14. Transport Information

DOT Classification CLASS 4.1: Flammable solid.

Identification : Hexamethylenetetramine **UN1328 PG III**

Special Provisions for Transport Not available.

DOT (Pictograms)



Section 15. Other Regulatory Information and Pictograms

Federal and State Regulations New Jersey: Methenamine
TSCA 8(b) inventory: Methenamine

California Proposition 65 Warnings

Other Regulations OSHA: Hazardous by definition of Hazard Communication Standard (29 CFR 1910.1200).
EINECS: This product is on the European Inventory of Existing Commercial Chemical Substances.

Other Classifications	WHMIS (Canada) CLASS B-4: Flammable solid. CLASS D-2B: Material causing other toxic effects (TOXIC).
	DSCL (EEC) R11- Highly flammable. S2- Keep out of the reach of children. R36/38- Irritating to eyes and skin. S46- If swallowed, seek medical advice immediately and show this container or label.

HMIS (U.S.A.)	<table border="1"> <tr><td>Health Hazard</td><td>2</td></tr> <tr><td>Flammability</td><td>1</td></tr> <tr><td>Reactivity</td><td>0</td></tr> <tr><td>Personal Protection</td><td>E</td></tr> </table>	Health Hazard	2	Flammability	1	Reactivity	0	Personal Protection	E	National Fire Protection Association (U.S.A.)		Health Flammability Reactivity Specific hazard
Health Hazard	2											
Flammability	1											
Reactivity	0											
Personal Protection	E											

WHMIS (Canada) (Pictograms)

DSCL (Europe) (Pictograms)

TDG (Canada) (Pictograms)

Section 10. Stability and Reactivity Data

Stability	The product is stable.
Instability Temperature	Not available.
Conditions of Instability	Heat, incompatible materials
Incompatibility with various substances	Reactive with oxidizing agents.
Corrosivity	Non-corrosive in presence of glass.
Special Remarks on Reactivity	Reacts violently with Na ₂ O ₂ . Decomposes when in prolonged contact with strong acids and concentrated solutions of organic acids.
Special Remarks on Corrosivity	Not available.
Polymerization	Will not occur.

Section 11. Toxicological Information

Routes of Entry	Inhalation. Ingestion.
Toxicity to Animals	Acute oral toxicity (LD50): 569 mg/kg [Mouse].
Chronic Effects on Humans	MUTAGENIC EFFECTS: Mutagenic for bacteria and/or yeast.
Other Toxic Effects on Humans	Hazardous in case of skin contact (irritant), of ingestion, of inhalation.
Special Remarks on Toxicity to Animals	Not available.
Special Remarks on Chronic Effects on Humans	May cause cancer (tumorigenic) based on animal data. May affect genetic material (mutagenic).
Special Remarks on other Toxic Effects on Humans	Acute Potential Health Effects: Skin: Causes skin irritation. Eyes: Causes eye irritation. Inhalation: Causes respiratory tract and mucous membrane irritation. May affect urinary system, and metabolism. Ingestion: Causes gastrointestinal tract irritation/distress with nausea, abdominal pain, vomiting. May affect the urinary system (bladder, kidneys), behavior (excitement, muscle contraction, spasticity, tremor).

Section 12. Ecological Information

Ecotoxicity	Not available.
BOD5 and COD	Not available.
Products of Biodegradation	Possibly hazardous short term degradation products are not likely. However, long term degradation products may arise.
Toxicity of the Products of Biodegradation	The products of degradation are less toxic than the product itself.
Special Remarks on the Products of Biodegradation	Not available.

ADR (Europe)
(Pictograms)



Protective Equipment



Gloves.



Lab coat.



Dust respirator. Be sure to use an approved/certified respirator or equivalent. Wear appropriate respirator when ventilation is inadequate.



Splash goggles.

Section 16. Other Information

References Not available.

Other Special Considerations Not available.

PREPARATION DATE: NOV 2005

Notice to Reader

All chemicals may pose unknown hazards and should be used with caution. This Material Safety Data Sheet (MSDS) applies only to the material as packaged. If this product is combined with other materials, deteriorates, or becomes contaminated, it may pose hazards not mentioned in this MSDS. It shall be the user's responsibility to develop proper methods of handling and personal protection based on the actual conditions of use. While this MSDS is based on technical data judged to be reliable, ProChem Chemicals Inc. assumes no responsibility for the completeness or accuracy of the information contained herein.