

# Great Lakes Treatment Corporation

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## MATERIAL SAFETY DATA SHEET

For Chemical Spill, Leak, Fire, Exposure or  
Accident Call Day or Night (517) 566-8008.

### PRODUCT IDENTIFICATION

PRODUCT NAME: 5644

DATE: October 27, 1989

### HAZARDOUS INGREDIENTS/IDENTITY INFORMATION

<u>COMPONENTS</u>	<u>OSHA PEL</u>	or	<u>ACGIH TLV</u>	<u>% By Weight</u>
Morpholine CAS #110-91-8			20 ppm	< 9.0
Cyclohexylamine CAS #108-91-8			10 ppm	< 10.0

### PHYSICAL/CHEMICAL CHARACTERISTICS

BOILING POINT (°F): >212	SPECIFIC GRAVITY: 1.0
VAPOR PRESSURE (mmHg): <17	pH (FULL STRENGTH): 12.2
VAPOR DENSITY (Air=1): 0.6	EVAPORATION RATE: Similar to water.
SOLUBILITY IN WATER: Complete	
APPEARANCE AND ODOR: Clear to light amber; ammonia odor	

### FIRE AND EXPLOSION HAZARD DATA

FLASH POINT (METHOD USED): > 180°F (approximate)

FLAMMABLE LIMITS: unk. LEL unk. UEL

EXTINGUISHING MEDIA: Water, dry chemical, carbon dioxide for small and large fires. Water may be ineffective on flames, but should be used to cool containers.

SPECIAL FIRE FIGHTING PROCEDURES: For small and large fires wear appropriate self-contained breathing apparatus and full protective clothing. Keep containers cool. Keep unnecessary people away. Isolate area; deny entry. Stay upwind. Remove sources of ignition. Move containers from fire area if you can do so without risk.

UNUSUAL FIRE AND EXPLOSION HAZARDS: This product is combustible. Emits some toxic nitrogen oxides, ammonia, carbon monoxide & carbon dioxide when heated or burned. Combustion of product under oxygen-starved conditions can produce many toxic products including hydrogen, cyanide, nitriles, cyanic acid, isocyanates, cyanogens, amides, carbamates.

### REACTIVITY DATA

STABILITY: Stable

MATERIALS TO AVOID: Strong acids or oxidizing agents, copper, brass, rubber, elastomeric compounds, sodium nitrite or other nitrosating agents, cleaning compounds.

HAZARDOUS DECOMPOSITION PRODUCTS: Nitrosamines could be formed from contact with sodium nitrite or other nitrosating agents. Ammonia vapors.

HAZARDOUS POLYMERIZATION: Will not occur.

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#### HEALTH HAZARD DATA

**INHALATION:** May cause irritation. Slightly toxic. Repeated or prolonged exposure may cause chronic irritation and bronchopneumonia.

**INGESTION:** May cause burns, nausea, and internal damage to organs. this product is toxic. May be fatal.

**SKIN:** Corrosive. May cause burns. Skin absorption likely with possible toxic effects.

**EYES:** Corrosive. May cause burns. Permanent damage possible, vapors may cause corneal edema, transient (hazy-vision). Do not wear contact lenses.

**NOTE:** Repeated or prolonged exposure may result in reproductive disorders. May aggravate asthma, skin disorders, allergies, chronic respiratory disease, eye disease.

**NOTE TO PHYSICIAN:** The product has effects similar to those of ammonia, and is highly injurious to all tissues. Chemical pneumonitis, pulmonary edema, laryngeal edema, and delayed scarring of the airway or other affected organs may occur following exposure. There is no specific treatment. Clinical management is based upon supportive treatment, which is similar to that for thermal burns. Victim with major skin contact should be maintained under medical observation for at least 24 hours due to possibility of delayed reaction.

#### EMERGENCY AND FIRST AID PROCEDURES

**EYE CONTACT:** Flush with water for 15 minutes. Contact a physician immediately.

**SKIN CONTACT:** Flush with water for 15 minutes; consult a physician if irritation occurs or for large, prolonged or repeated contact. Remove contaminated clothing.

**INHALATION:** Remove to fresh air. Apply artificial respiration if breathing stops. contact a physician.

**INGESTION:** Give large amounts of water and contact a physician immediately.

#### PRECAUTIONS FOR SAFE HANDLING AND USE

Do not touch spilled material. Stop leak if you can do so without risk. Use appropriate safety equipment. Remove sources of ignition. Stay upwind. Ventilate area. Keep unnecessary people away. Isolate area. Keep out of low areas.

**SMALL SPILLS:** Contain and put into appropriate containers and cover. Absorb with sand or suitable nonreactive.

**LARGE SPILLS:** Dam spills to contain liquid. Put into appropriate container and cover.

**DISPOSAL:** Dispose of in accordance with all applicable local, state, and federal regulations.

**HANDLING PRECAUTIONS:** Store in dry, cool place. Avoid storage temperatures above 100°F. Recommended shelf life; one year. Keep tightly capped. Keep away from sources of ignition and reactive materials. Do not breathe vapors.