

Safety Data Sheet

WAT B-2480

1. IDENTIFICATION

Product name	WAT B-2480
Description	Aqueous amine solution
Product class	Boiler
Supplier address	1919 Case Parkway North Twinsburg, OH 44087
Telephone numbers	
<u>Company Phone Number</u>	(800) 229-6801
<u>Emergency Telephone</u>	INFOTRAC 800-535-5053

2. HAZARDS IDENTIFICATION

Hazard classification	Flammable Liquids, Category 3 Acute Toxicity: Oral, Category 2 Acute Toxicity: Dermal, Category 4 Skin Corrosion, Category 1 Serious Eye Damage, Category 1 Reproductive Toxicity, Category 2
Signal word	Danger
Hazard statements	Flammable liquid and vapor. Fatal if swallowed. Harmful in contact with skin. Causes severe skin burns and eye damage. Causes serious eye damage. Suspected of damaging fertility or the unborn child.

Pictograms of related hazards



Precautionary statements

Prevention

- Keep away from heat, hot surfaces, sparks, open flames, and other ignition sources. No smoking.
- Ground and bond container and receiving equipment.
- Use explosion-proof electrical equipment.
- Use only non-sparking tools.
- Take precautionary measures against static discharge.
- Wear protective gloves, protective clothing, eye protection, and face protection.
- Wash skin 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.

Response

IF ON SKIN (or hair): Remove immediately all contaminated clothing. Rinse skin with water or emergency shower.
 In case of fire: Use water spray, foam, dry chemical, or carbon dioxide for extinction. Take off contaminated clothing and wash it before reuse.
 IF SWALLOWED: Rinse mouth. DO NOT induce vomiting. Immediately contact a POISON CENTER or health care provider.
 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing. Immediately contact a POISON CENTER or health care provider.
 IF exposed or concerned: Get medical attention.

Storage

Store in a well-ventilated place. Keep cool.
 Store locked up.

Disposal

Dispose of contents and container in accordance with local, state, and federal regulations.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS #	Weight %
Cyclohexylamine	108-91-8	20–30
Morpholine	110-91-8	1–10
Diethylhydroxylamine (DEHA)	3710-84-7	1–10
Non-hazardous substances	Proprietary	>50

4. FIRST-AID MEASURES

Eye contact	Immediately flush eyes with plenty of water for at least 15 minutes, lifting lower and upper eyelids occasionally to ensure complete rinsing. Remove contact lenses if present and easy to do, then resume rinsing. Get medical attention immediately.
Skin contact	Immediately remove all contaminated clothing. Rinse with copious amounts of water; use an emergency shower if available. Wash contaminated clothing before reuse.
Ingestion	If swallowed, DO NOT induce vomiting. Rinse mouth and get emergency medical attention. Do not give anything by mouth unless instructed to do so by a poison center or health care provider.
Inhalation	If inhaled, move victim to fresh air. Seek emergency medical attention if breathing is difficult; perform artificial respiration if breathing stops.
Note to health care provider	Esophageal corrosion may contraindicate the use of gastric lavage and/or activated charcoal.

5. FIRE-FIGHTING MEASURES

Suitable extinguishing media	Water spray, foam, dry chemical, carbon dioxide
Unsuitable extinguishing media	No information available
Protective equipment and precautions for firefighters	Stay upwind of the fire. Full protective equipment including self-contained breathing apparatus should be used. Use water to cool closed containers. Contain water runoff if possible.
Specific hazards	Explosive vapor-air mixtures may form at temperatures above the flash point. Vapors may flow to distant ignition sources leading to flashback. Dense vapors may collect near the ground.
Hazardous combustion products	Carbon oxides, nitrogen oxides

6. ACCIDENTAL RELEASE MEASURES

Personal precautions	Evacuate the area of all non-essential personnel. Do not touch spilled material without proper protective equipment. Ventilate the area and mitigate further release if it is safe to do so. Avoid contact with eyes.
Methods for clean-up	
<u>Small spills</u>	Contain spill and soak up with an inert absorbent material and place residues in a properly labeled container for disposal. Avoid discharge into sewer or surface water.
<u>Large spills</u>	Contain spill using trenches, diking, or absorption with an inert material (i.e. sand or earth). Reclaim spilled material into recovery or salvage drums or tank truck for proper disposal.

7. HANDLING AND STORAGE

Advice on safe handling	Avoid contact with eyes, skin, and clothing. Avoid breathing vapor or mist. Wash hands thoroughly after handling.
Storage conditions	Store in a cool, dry, well-ventilated area away from incompatible materials. Keep containers closed when not in use.
Suitable materials of construction	Corrosion-resistant container; original container only is recommended.
Unsuitable materials of construction	Metals

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Eye/face protection	Chemical splash goggles, face shield
Skin protection	Chemical-resistant gloves and body-covering clothing
Respiratory protection	Observe published airborne exposure limits. NIOSH approved respirator should be used in accordance with OSHA respiratory protection requirements (29 CFR 1910.134).
Engineering controls	Adequate ventilation, eye-wash station, and emergency shower
General hygiene considerations	Do not eat, drink, or smoke while handling this product.

Chemical Name	OSHA PEL	ACGIH TLV
Cyclohexylamine	10 ppm	10 ppm; 40 mg/m ³
Morpholine	70 mg/m ³	20 ppm
Diethylhydroxylamine (DEHA)	None established	None established
Non-hazardous substances	None established	None established

9. PHYSICAL AND CHEMICAL PROPERTIES

pH	11.0-13.0
Appearance	Clear colorless to pale yellow
Odor	No information available
Odor Threshold	No information available
Melting/freezing point	No information available
Initial boiling point/boiling range	No information available
Flash point	No information available
Evaporation rate	No information available
Flammability (solid, gas)	No information available
Upper/lower flammability or explosive limits	No information available
Vapor pressure	No information available
Vapor density	No information available
VOC content	No information available
Specific gravity	0.950-1.050
Solubility	No information available
Partition coefficient n-octanol/water	No information available
Auto-ignition temperature	No information available
Decomposition temperature	No information available
Viscosity	No information available

10. STABILITY AND REACTIVITY

Chemical stability	Stable under normal conditions of storage and handling.
Hazardous polymerization	Polymerization will not occur.
Conditions to avoid	Heat, ignition sources, incompatibilities
Incompatibilities	Strong acids, oxidizers
Hazardous decomposition products	Reaction with acids may yield highly toxic nitrogen oxides.

11. TOXICOLOGICAL INFORMATION

Likely routes of exposure Skin, eyes, ingestion

Acute toxicity

Cyclohexylamine

Parameter	Result
LD50, Oral (rat)	432 mg/kg
LD50, Dermal (rabbit)	277 mg/kg
LC50, Inhalation (rat)	7,500 mg/m ³

Morpholine

Parameter	Result
LD50, Oral (rat)	1,450 mg/kg
LD50, Oral (mouse)	525 mg/kg
LC50, Inhalation (mouse)	1,320 mg/m ³ /2H
LC50, Inhalation (rat)	8,000 ppm
Sensitization, Dermal (guinea pig)	Not sensitizing

Diethylhydroxylamine (DEHA)

Parameter	Result
LDLo, Oral (rat)	1,600 mg/kg
LDLo, Dermal (rabbit)	2,000 mg/kg
LD50, Oral (rat)	2,190 mg/kg
LD50, Dermal (rabbit)	1,300 mg/kg

Acute symptoms and effects

Eye	Severe eye irritation with serious damage including, but not limited to, tissue destruction, corneal opacification, and temporary or permanent blindness.
Skin	Skin irritation with or without pain, burning, itching, redness, and swelling. Symptoms may be exacerbated by open wounds, excoriations, rashes, or other skin breaches. Onset of symptoms may be delayed relative to exposure.
Ingestion	Gastrointestinal distress with or without nausea, vomiting, and diarrhea. May cause irritation or corrosion of the oral and esophageal mucosa.
Inhalation	Upper respiratory irritation with or without cough, watering of the eyes, and postnasal drip. Inhalation may cause central nervous system depression with or without dizziness, drowsiness, fatigue, syncope, shortness of breath, and loss of consciousness.
Reproductive effects	Exposure to cyclohexylamine has been implicated in damaging fertility or causing harm to unborn offspring in animal studies.
Teratogenicity	No information available
Mutagenicity	No information available
Embryotoxicity	No information available
Sensitization to product	No information available

Synergistic products	No information available
Carcinogenicity	Morpholine has been evaluated by the IARC and categorized as "not classifiable as to carcinogenicity in humans" (group 3).
Chronic	No information available

12. ECOLOGICAL INFORMATION

Aquatic toxicity

Cyclohexylamine

Parameter	Result
96 hr LC50, Rainbow trout	44-90 mg/L
48 hr EC50, Daphnia magna	58-80 mg/L

Morpholine

Parameter	Result
96 hr LC50, Bluegill sunfish	>350 mg/L
48 hr EC50, Daphnia magna	100-119 mg/L

Diethylhydroxylamine (DEHA)

Parameter	Result
48 hr EC50, Daphnia magna	8.2 mg/L

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Parameter	Result
48 hr LC50, Daphnia magna	392.3 mg/L

Persistence	No information available
Bioaccumulative potential	No information available
Mobility	No information available

13. DISPOSAL CONSIDERATIONS

Disposal	Dispose of in accordance with federal, state, and local regulations. Do not discharge into sewer or surface water.
RCRA status	As sold, discarded product would be considered a RCRA hazardous waste based on the corrosive characteristics. The EPA hazardous waste number is D002.

14. TRANSPORT INFORMATION

US Department of Transportation (DOT)

UN Number	UN2734
Proper shipping name	Amines, liquid, corrosive, flammable, n.o.s. (contains cyclohexylamine, morpholine, diethylhydroxylamine)
Primary hazard class/division	8
Secondary hazard	3
Packing group	II
Label	Corrosive, Flammable

15. REGULATORY INFORMATION

OSHA Hazard Communication Status	Flammable Liquids, Category 3 Acute Toxicity: Oral, Category 2 Acute Toxicity: Dermal, Category 4 Skin Corrosion, Category 1 Serious Eye Damage, Category 1 Reproductive Toxicity, Category 2
EPA Registration Number	Not applicable
TSCA	The ingredients of this product are listed on the Toxic Substances Control Act (TSCA) Chemical Substances Inventory.

CERCLA

EPA Hazardous Substances (40 CFR 302)

Chemical Name	Reportable Quantity (RQ)
Cyclohexylamine	None
Morpholine	None
Diethylhydroxylamine (DEHA)	None

SARA Title III (Sections 302, 311, 312, and 313)

Section 302 Extremely Hazardous Substances (40 CFR 355)

Chemical Name	CAS#	RQ	TPQ
Cyclohexylamine	108-91-8	10,000 lb	10,000 lb

Section 311 and 312 Health and Physical Hazards

Immediate	Delayed	Fire	Pressure	Reactivity
Yes	Yes	Yes	No	No

Section 313 Toxic Chemicals (40 CFR 372)

Chemical Name	CAS Number	Percent by Weight
None		

California Prop 65

Chemical Name	CAS Number	Hazard
None		

16. OTHER INFORMATION

HMIS Ratings	Health—3; Flammability—2; Reactivity—0
NFPA Ratings	Health—3; Flammability—2; Reactivity—0
HMIS/NFPA Rating Scale	Minimal—0; Slight—1; Moderate—2; Serious—3; Severe—4
SDS Issue Date	3/25/2015
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Version	3

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