



Cannon Boiler Works, Inc.
510 Constitution Blvd.
New Kensington, PA 15068
(724) 335-8541

Safety Data Sheet

CBW Blue-2460

1. IDENTIFICATION

Product name	CBW Blue-2460
Description	Amine Solution
Product class	Specialty
Supplier address	510 Constitution Blvd. New Kensington, PA 15068
Telephone numbers	
<u>Company Phone Number</u>	(724) 335-8541
<u>Emergency Telephone</u>	INFOTRAC 800-535-5053

2. HAZARDS IDENTIFICATION

Hazard classification	Flammable Liquids, Category 3 Acute Toxicity: Oral, Category 4 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. Harmful 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
2-(Diethylamino)-ethanol (DEAE)	100-37-8	1–10
Morpholine	110-91-8	1–10
Non-hazardous substances	Proprietary	>60

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 No specific information—treat symptomatically.

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	Responders should stay upwind. Full protective equipment including self-contained breathing apparatus should be used (HAZMAT suits) if there is liquid methanol or if vapor levels are above the threshold limit value (TLV). Water may be used to cool closed containers to prevent pressure build-up and possible autoignition or explosion when exposed to extreme heat. If possible, firefighters should control run-off water to prevent environmental contamination.
Specific hazards	Combustion may produce toxic gases. Vapor is dense and may collect near the ground; flammable vapor may flow to distant ignition sources resulting in flashback.
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
Skin protection	Chemical-resistant gloves and body-covering clothing

Respiratory protection	NIOSH approved respirator in accordance with OSHA respiratory protection requirements (29 CFR 1910.134) if airborne concentrations exceed published exposure limits.
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
2-(Diethylamino)-ethanol (DEAE)	50 mg/m ³	2 ppm
Morpholine	70 mg/m ³	20 ppm
Non-hazardous substances	None established	None established

9. PHYSICAL AND CHEMICAL PROPERTIES

pH	12.0-13.0
Appearance	Clear colorless to pale yellow liquid
Odor	Amine
Odor Threshold	No information available
Melting/freezing point	No information available
Initial boiling point/boiling range	No information available
Flash point	131°F (55°C)
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	0.945-1.025
Solubility	Complete
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	Extreme temperatures, incompatibilities
Incompatibilities	Strong acids, oxidizers
Hazardous decomposition products	No known non-thermal decomposition hazards.

11. TOXICOLOGICAL INFORMATION

Likely routes of exposure Skin, eyes, ingestion

Acute toxicity

Cyclohexylamine

Parameter	Result
LD ₅₀ , Oral (rat)	11 mg/kg
LD ₅₀ , Dermal (rabbit)	277 mg/kg
LC ₅₀ , Inhalation (rat)	7,500 mg/m ³

2-(Diethylamino)-ethanol (DEAE)

Parameter	Result
LD ₅₀ , Oral (rat)	1,300 mg/kg
LD ₅₀ , Dermal (rabbit)	1,100 mg/kg
LC _{Lo} , Inhalation (rat)	4,500 mg/m ³ /4hr

Morpholine

Parameter	Result
LD ₅₀ , Oral (rat)	1,450 mg/kg
LD ₅₀ , Oral (mouse)	525 mg/kg
LC ₅₀ , Inhalation (mouse)	1,320 mg/m ³ /2H
LC ₅₀ , Inhalation (rat)	8,000 ppm
Sensitization, Dermal (guinea pig)	Not sensitizing

Acute symptoms and effects

Eye	Eye irritation with or without pain, burning, itching, redness, discharge, and serious eye damage.
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.
Ingestion	Gastrointestinal distress with or without nausea, vomiting, and diarrhea.
Inhalation	Upper respiratory irritation with or without cough, watering of the eyes, and postnasal drip.
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	No components have been identified as carcinogenic by OSHA, NTP, or IARC.
Chronic	No information available

12. ECOLOGICAL INFORMATION

Aquatic toxicity

Cyclohexylamine

Parameter	Result
96 hr LC ₅₀ , Rainbow trout	44-90 mg/L
48 hr EC ₅₀ , Daphnia magna	58-80 mg/L

2-(Diethylamino)-ethanol (DEAE)

Parameter	Result
96 hr LC ₅₀ , Fathead minnow	1,780 mg/L
48 hr EC ₅₀ , Daphnia magna	165 mg/L

Morpholine

Parameter	Result
96 hr LC ₅₀ , Bluegill sunfish	>350 mg/L
48 hr EC ₅₀ , Daphnia magna	100-119 mg/L

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Parameter	Result
48 hr LC ₅₀ , Daphnia magna	190 mg/L
48 hr LC ₅₀ , Cerodaphnia dubia	115 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.

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, 2-(Diethylamino)-ethanol)

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 4
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.

CERCLAEPA Hazardous Substances (40 CFR 302)

Chemical Name	Reportable Quantity (RQ)
Cyclohexylamine	None
2-(Diethylamino)-ethanol (DEAE)	None
Morpholine	None
Non-hazardous substances	None

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

Section 302 Extremely Hazardous Substances (40 CFR 355)

Chemical Name	CAS#	RQ	TPQ
None			

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		

16. OTHER INFORMATION

HMIS Ratings Health—2; Flammability—2; Reactivity—0
NFPA Ratings Health—2; Flammability—2; Reactivity—0
HMIS/NFPA Rating Scale Minimal—0; Slight—1; Moderate—2; Serious—3; Severe—4
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