



Safety Data Sheet

Issue Date: 01-Jun-2010

Revision Date: 09-Apr-2015

Version 1

1. IDENTIFICATION

Product Identifier

Product Name Condensate Return Line Treatment

Other means of identification

SDS # BL-150

UN/ID No UN1760

Recommended use of the chemical and restrictions on use

Recommended Use Steam Boiler Treatment.

Details of the supplier of the safety data sheet

Manufacturer Address

Atlantic Chemical & Equipment Company
3471 Atlanta Industrial Parkway
Suite 200
Atlanta, GA 30331 USA

Emergency Telephone Number

Company Phone Number 404-505-6626

1-800-929-2436

Emergency Telephone (24 hr)

Chemtrec 1-800-424-9300 (USA) 1-800-567-7455 (International)

2. HAZARDS IDENTIFICATION

Appearance Clear liquid

Physical State Liquid

Odor Strong amine odor

Classification

Skin corrosion/irritation	Category 1 Sub-category C
Serious eye damage/eye irritation	Category 1

Signal Word

Danger

Hazard Statements

Causes severe skin burns and eye damage



Precautionary Statements - Prevention

Do not breathe dust/fume/gas/mist/vapors/spray
 Wash face, hands and any exposed skin thoroughly after handling
 Wear protective gloves/protective clothing/eye protection/face protection

Precautionary Statements - Response

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
 Immediately call a poison center or doctor/physician
 IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower
 Wash contaminated clothing before reuse
 If skin irritation persists: Get medical advice/attention
 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing
 Immediately call a poison center or doctor/physician
 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting
 Immediately call a poison center or doctor/physician

Precautionary Statements - Storage

Store locked up

Precautionary Statements - Disposal

Dispose of contents/container to an approved waste disposal plant

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS No	Weight-%
Morpholine	110-91-8	<10

If Chemical Name/CAS No is "proprietary" and/or Weight-% is listed as a range, the specific chemical identity and/or percentage of composition has been withheld as a trade secret.

4. FIRST-AID MEASURES

First Aid Measures

Eye Contact	Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a poison center or doctor/physician.
Skin Contact	Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower. Wash contaminated clothing before reuse. If irritation persists, seek medical attention.
Inhalation	Remove victim to fresh air and keep at rest in a position comfortable for breathing. If breathing is difficult, give oxygen. Immediately call a poison center or doctor/physician.
Ingestion	Rinse mouth. Drink plenty of water. Do not induce vomiting. Immediately call a poison center or doctor/physician.

Most important symptoms and effects

Symptoms	Causes severe skin burns and eye damage. Ingestion may cause gastric distress. Inhalation may cause irritation to nasal passages.
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Indication of any immediate medical attention and special treatment needed

Notes to Physician	Treat symptomatically.
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5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Unsuitable Extinguishing Media Not determined.

Specific Hazards Arising from the Chemical

Fire may produce irritating and/or toxic gases.

Protective equipment and precautions for firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Personal Precautions Use personal protection recommended in Section 8.

Environmental Precautions Prevent from entering into soil, ditches, sewers, waterways and/or groundwater. See Section 12, Ecological Information. See Section 13: DISPOSAL CONSIDERATIONS.

Methods and material for containment and cleaning up

Methods for Containment Prevent further leakage or spillage if safe to do so.

Methods for Clean-Up Dilute with large amount of water. Contain and collect with an inert absorbent and place into an appropriate container for disposal.

7. HANDLING AND STORAGE

Precautions for safe handling

Advice on Safe Handling Handle in accordance with good industrial hygiene and safety practice. Use personal protection recommended in Section 8. Avoid contact with skin, eyes or clothing. Wash face, hands, and any exposed skin thoroughly after handling. Do not breathe dust/fume/gas/mist/vapors/spray. Keep containers closed when not in use. Follow all product label instructions. Use only as directed.

Conditions for safe storage, including any incompatibilities

Storage Conditions Keep container tightly closed and store in a cool, dry and well-ventilated place. Store locked up.

Incompatible Materials Acids. Acid products. Strong oxidizers.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure Guidelines

Chemical Name	ACGIH TLV	OSHA PEL	NIOSH IDLH
Morpholine 110-91-8	TWA: 20 ppm S*	TWA: 20 ppm TWA: 70 mg/m ³ (vacated) TWA: 20 ppm (vacated) TWA: 70 mg/m ³ (vacated) STEL: 30 ppm (vacated) STEL: 105 mg/m ³ (vacated) S* S*	IDLH: 1400 ppm TWA: 20 ppm TWA: 70 mg/m ³ STEL: 30 ppm STEL: 105 mg/m ³

Appropriate engineering controls

Engineering Controls Ensure adequate ventilation, especially in confined areas. Eyewash stations. Showers.

Individual protection measures, such as personal protective equipment

Eye/Face Protection Chemical goggles or full face shield.

Skin and Body Protection Chemical resistant rubber or plastic gloves.

Respiratory Protection NIOSH/MSHA approved respirator for organic/amine gas, dust, and mists.

General Hygiene Considerations Handle in accordance with good industrial hygiene and safety practice.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Physical State	Liquid	Odor	Strong amine odor
Appearance	Clear liquid	Odor Threshold	Not determined
Color	Clear		

<u>Property</u>	<u>Values</u>	<u>Remarks • Method</u>
pH	11.5	
Melting Point/Freezing Point	Not applicable	
Boiling Point/Boiling Range	100 °C / 212 °F	
Flash Point	>93.3 °C / >200 °F	
Evaporation Rate	1	(Water = 1)
Flammability (Solid, Gas)	Liquid-Not applicable	
Upper Flammability Limits	Not determined	
Lower Flammability Limit	Not determined	
Vapor Pressure	17.0 mm Hg	
Vapor Density	0.62	(Air=1)
Specific Gravity	1.00	(Water = 1)
Water Solubility	Completely soluble	
Solubility in other solvents	Not determined	
Partition Coefficient	Not determined	
Auto-ignition Temperature	Not determined	
Decomposition Temperature	Not determined	
Kinematic Viscosity	Not determined	
Dynamic Viscosity	Not determined	
Explosive Properties	Not determined	
Oxidizing Properties	Not determined	

10. STABILITY AND REACTIVITY

Reactivity

Not reactive under normal conditions.

Chemical Stability

Stable under recommended storage conditions.

Possibility of Hazardous Reactions

None under normal processing.

Hazardous Polymerization Hazardous polymerization does not occur.

Conditions to Avoid

Keep separated from incompatible substances. Keep out of reach of children.

Incompatible Materials

Acids. Acid products. Strong oxidizers.

Hazardous Decomposition Products

None known based on information supplied.

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Product Information

Eye Contact Causes severe eye damage.

Skin Contact Causes severe skin burns.

Inhalation Avoid breathing vapors or mists.

Ingestion Do not ingest.

Component Information

Chemical Name	Oral LD50	Dermal LD50	Inhalation LC50
Morpholine 110-91-8	= 1050 mg/kg (Rat)	310 - 810 mg/kg (Rabbit)	= 8000 ppm (Rat) 8 h

Information on physical, chemical and toxicological effects

Symptoms Please see section 4 of this SDS for symptoms.

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Carcinogenicity Group 3 IARC components are "not classifiable as human carcinogens".

Chemical Name	ACGIH	IARC	NTP	OSHA
Morpholine 110-91-8		Group 3		

Numerical measures of toxicity

Not determined

12. ECOLOGICAL INFORMATION

Ecotoxicity

The product is not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.

Component Information

Chemical Name	Algae/aquatic plants	Fish	Toxicity to microorganisms	Crustacea
Morpholine 110-91-8	28: 96 h Pseudokirchneriella subcapitata mg/L EC50 static	350: 96 h Lepomis macrochirus mg/L LC50 static 375 - 460: 96 h Oncorhynchus mykiss mg/L LC50 1000: 96 h Brachydanio rerio mg/L LC50 static	EC50 = 57.0 mg/L 30 min	100: 24 h Daphnia magna mg/L EC50

Persistence/Degradability

Not determined.

Bioaccumulation

Not determined.

Mobility

Chemical Name	Partition Coefficient
Morpholine 110-91-8	-2.55

Other Adverse Effects

Not determined

13. DISPOSAL CONSIDERATIONS

Waste Treatment Methods

Disposal of Wastes

Disposal should be in accordance with applicable regional, national and local laws and regulations.

Contaminated Packaging

Disposal should be in accordance with applicable regional, national and local laws and regulations.

14. TRANSPORT INFORMATION

Note Please see current shipping paper for most up to date shipping information, including exemptions and special circumstances.

DOT

UN/ID No UN1760
 Proper Shipping Name Corrosive liquids, n.o.s. (Morpholine)
 Hazard Class 8
 Packing Group III

IATA

UN/ID No UN1760
 Proper Shipping Name Corrosive liquids, n.o.s. (Morpholine)
 Hazard Class 8
 Packing Group III

IMDG

UN/ID No UN1760
 Proper Shipping Name Corrosive liquids, n.o.s. (Morpholine)
 Hazard Class 8
 Packing Group III

15. REGULATORY INFORMATION

International Inventories

Chemical Name	TSCA	DSL	NDSL	EINECS	ELINCS	ENCS	IECSC	KECL	PICCS	AICS
Morpholine	Present	X		Present		Present	X	Present	X	X

Legend:

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory
DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List
EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances
ENCS - Japan Existing and New Chemical Substances
IECSC - China Inventory of Existing Chemical Substances
KECL - Korean Existing and Evaluated Chemical Substances
PICCS - Philippines Inventory of Chemicals and Chemical Substances
AICS - Australian Inventory of Chemical Substances

US Federal Regulations

CERCLA

This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355).

SARA 313

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

CWA (Clean Water Act)

This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42)

US State Regulations**California Proposition 65**

This product does not contain any Proposition 65 chemicals.

U.S. State Right-to-Know Regulations

Chemical Name	New Jersey	Massachusetts	Pennsylvania
Morpholine 110-91-8	X	X	X

16. OTHER INFORMATION

NFPA**Health Hazards**

Not determined

Flammability

Not determined

Instability

Not determined

Special Hazards

Not determined

HMIS**Health Hazards**

2

Flammability

1

Physical Hazards

0

Personal Protection

Not determined

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Revision Note: New format

Disclaimer

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

End of Safety Data Sheet