



SAFETY DATA SHEET

Revision Date 01/30/2015

REVISION NUMBER: 2

1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

Product identifier

Product name RLT-280, Steam Condensate Corrosion Inhibitor

Other means of identification

Product code 118103

UN/ID No. 2920

Synonyms NONE

Recommended use of the chemical and restrictions on use

Recommended Use Corrosion inhibitor.

Uses advised against No information available

Details of the supplier of the safety data sheet

Manufacturer Address

Rochester Midland Corporation
155 Paragon Drive
Rochester, New York 14624 USA

Emergency telephone number

EMERGENCY TELEPHONE INFOTRAC: 1-800-535-5053
OUTSIDE U.S.: +1-352-323-3500

2. HAZARDS IDENTIFICATION

Classification

OSHA Regulatory Status

This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Acute toxicity - Oral	Category 4
Skin corrosion/irritation	Category 1
Serious eye damage/eye irritation	Category 1
Reproductive Toxicity	Category 2
Flammable liquids	Category 3
Corrosive to metals	Category 1

Label elements

Emergency Overview

DANGER

Hazard statements

Harmful if swallowed
Causes severe skin burns and eye damage
Suspected of damaging fertility or the unborn child
Flammable liquid and vapor
May be corrosive to metals

**Appearance** Light amber liquid.**Physical state** Liquid**Odor** Amine**Precautionary Statements - Prevention**

Obtain special instructions before use
 Do not handle until all safety precautions have been read and understood
 Use personal protective equipment as required
 Wash face, hands and any exposed skin thoroughly after handling
 Do not eat, drink or smoke when using this product
 Do not breathe dust/fume/gas/mist/vapors/spray
 Keep away from heat/sparks/open flames/hot surfaces. — No smoking
 Keep container tightly closed
 Ground/bond container and receiving equipment
 Use explosion-proof electrical/ventilating/lighting/equipment
 Use only non-sparking tools
 Take precautionary measures against static discharge
 Keep only in original container

Precautionary Statements - Response

Immediately call a POISON CENTER or doctor/physician
 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 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: Call a POISON CENTER or doctor/physician if you feel unwell
 Rinse mouth
 Do NOT induce vomiting
 In case of fire: Use CO₂, dry chemical, or foam for extinction
 Absorb spillage to prevent material damage

Precautionary Statements - Storage

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

Precautionary Statements - Disposal

Dispose of contents/container to an approved waste disposal plant

Hazards not otherwise classified (HNOC)

No information available

Other Information

- May be harmful in contact with skin
- Harmful to aquatic life with long lasting effects
- Harmful to aquatic life

3. COMPOSITION/INFORMATION ON INGREDIENTS

PRODUCT COMPOSITION CAS#	CAS No.	%	TRADE SECRET
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CYCLOHEXYLAMINE	108-91-8	25	*
Diethylaminoethanol (DEAE)	100-37-8	25	*

*The exact percentage (concentration) of composition has been withheld as a trade secret.

4. FIRST AID MEASURES

First aid measures

General advice	Immediately call a POISON CENTER or doctor/physician.
Eye contact	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.
Skin contact	IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower. Wash contaminated clothing before reuse.
Inhalation	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.
Ingestion	IF SWALLOWED: Call a POISON CENTER or doctor if you feel unwell. Rinse mouth. Do NOT induce vomiting.

Most important symptoms and effects, both acute and delayed

Symptoms No information available.

Indication of any immediate medical attention and special treatment needed

Note to physicians Treat symptomatically.

5. FIRE-FIGHTING MEASURES

Suitable extinguishing media

Water fog, carbon dioxide, foam, dry chemical.

Unsuitable extinguishing media Do not use a solid water stream as it may scatter and spread fire.

Specific hazards arising from the chemical

No information available.

Explosion data

Sensitivity to Mechanical Impact NONE.

Sensitivity to Static Discharge NONE.

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 Wear adequate personal protective equipment, see Section 8, Exposure Controls/Personal Protection.

Environmental precautions

Environmental precautions See Section 12 for additional ecological information.

Methods and material for containment and cleaning up

Methods for containment Dike to contain. Pick up with absorbant material. Put in suitable container for disposal.

Methods for cleaning up Pick up and transfer to properly labeled containers. Flush residue with water.

7. HANDLING AND STORAGE

Precautions for safe handling

Advice on safe handling Do not breathe dust/fume/gas/mist/vapors/spray. Avoid contact with eyes, skin and clothing. Do not eat, drink or smoke when using this product. Wash thoroughly after handling.

Conditions for safe storage, including any incompatibilities

Storage Conditions Keep containers tightly closed in a dry, cool and well-ventilated place. Store locked up. Do not store near heat, sparks or flame. Vapors are heavier than air and may tend to collect in low or poorly ventilated areas resulting in possible fire and/or inhalation hazard. DO NOT pressurize, weld, or heat containers. Empty containers may retain product residue, follow MSDS/label precautions even after container is emptied.

Incompatible materials Acids. Strong oxidents, such as nitric acid, or hypochlorites.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Exposure Guidelines

PRODUCT COMPOSITION CAS#	ACGIH TLV	OSHA PEL	NIOSH IDLH
CYCLOHEXYLAMINE 108-91-8	TWA: 10 ppm	(vacated) TWA: 10 ppm (vacated) TWA: 40 mg/m ³	-
Diethylaminoethanol (DEAE) 100-37-8	TWA: 2 ppm	S* (vacated) S* (vacated) TWA: 10 ppm (vacated) TWA: 50 mg/m ³ TWA: 10 ppm TWA: 50 mg/m ³	100 ppm

Appropriate engineering controls

ENGINEERING CONTROLS Showers
Eyewash stations
Ventilation systems.

Individual protection measures, such as personal protective equipment

Eye/face protection Goggles and face shield are recommended to minimize eye contact.

Skin and body protection Nitrile, neoprene, or other appropriate gloves are recommended to minimize hand skin contact. Appropriate protective clothing as needed to prevent skin contact. It is the responsibility of the end user of this product to determine level of PPE required that is consistent with safe use of this product.

RESPIRATORY PROTECTION Use NIOSH approved organic vapor respirator as needed if spray mist or vapors exceed PEL or TLV.

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

Appearance	Light amber liquid.	Odor	Amine
Color	Amber	Odor threshold	No information available
Property	Values	Remarks • Method	
pH	12.8		
Melting point/freezing point	No information available		
Boiling point / boiling range	100 °C / 212 °F		
Flash point	56 °C / 132 °F		
Evaporation rate	No information available		
Flammability (solid, gas)	No information available		
Flammability Limit in Air			
Upper flammability limit:	No information available		
Lower flammability limit:	No information available		
Vapor pressure	No information available		
Vapor density	No information available		
Specific gravity	0.94 - 0.98		
Water solubility	No information available		
Solubility in other solvents	No information available		
Partition coefficient	No information available		
Autoignition temperature	No information available		
Decomposition temperature	No information available		
Kinematic viscosity	No information available		
Dynamic viscosity	No information available		
Explosive properties	No information available		
Oxidizing properties	No information available		
Other Information			
Softening point	No information available		
VOC (EPA METH.24) (G/L):	480		
Density	8.0 lbs/gal		
Bulk density	No information available		

10. STABILITY AND REACTIVITY

REACTIVITY

No data available

Chemical stability

Stable under recommended storage conditions.

Possibility of Hazardous Reactions

None under normal processing.

CONDITIONS TO AVOID

Heat, flames and sparks. Extremes of temperature and direct sunlight.

Incompatible materials

Acids. Strong oxidents, such as nitric acid, or hypochlorites.

Hazardous Decomposition Products

Ammonia. Oxides of Carbon. Oxides of Nitrogen.

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Product Information	Harmful if swallowed Causes severe skin burns and eye damage
Inhalation	Causes burns.

Eye contact	Corrosive to the eyes and may cause severe damage including blindness.
Skin contact	Causes burns. May be harmful in contact with skin.
Ingestion	Harmful if swallowed. Causes burns.

PRODUCT COMPOSITION CAS#	Oral LD50	Dermal LD50	Inhalation LC50
CYCLOHEXYLAMINE 108-91-8	= 11 mg/kg (Rat)	= 320 mg/kg (Rabbit)	-
Diethylaminoethanol (DEAE) 100-37-8	= 1300 mg/kg (Rat)	= 1260 µL/kg (Rabbit)	-

Information on toxicological effects

Symptoms No information available.

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

Sensitization No information available.
Germ cell mutagenicity No information available.
Carcinogenicity The table below indicates whether each agency has listed any ingredient as a carcinogen.

PRODUCT COMPOSITION CAS#	ACGIH	IARC	NTP	OSHA
CYCLOHEXYLAMINE 108-91-8	-	Group 3	-	-

Reproductive Toxicity May impair fertility. May cause harm to the unborn child. Possible risk of impaired fertility.
Possible risk of harm to the unborn child.

STOT - single exposure No information available.
STOT - repeated exposure No information available.
Aspiration hazard No information available.

Numerical measures of toxicity - Product Information

The following values are calculated based on chapter 3.1 of the GHS document .

ATEmix (oral) 1444 mg/kg
ATEmix (dermal) 2221 mg/kg
ATEmix (inhalation-dust/mist) 6 mg/l

12. ECOLOGICAL INFORMATION**Ecotoxicity**

0% of the mixture consists of components(s) of unknown hazards to the aquatic environment

PRODUCT COMPOSITION CAS#	Algae/aquatic plants	Fish	Crustacea
CYCLOHEXYLAMINE 108-91-8	20: 96 h Pseudokirchneriella subcapitata mg/L EC50 20: 96 h Pseudokirchneriella subcapitata mg/L EC50 static	470: 96 h Brachydanio rerio mg/L LC50 static 44 - 90: 96 h Oncorhynchus mykiss mg/L LC50	-
Diethylaminoethanol (DEAE) 100-37-8	30: 72 h Desmodesmus subspicatus mg/L EC50	1660 - 1920: 96 h Pimephales promelas mg/L LC50 flow-through	83.6: 48 h Daphnia magna Straus mg/L EC50

Persistence and degradability

No information available.

Bioaccumulation

No information available.

PRODUCT COMPOSITION CAS#	Partition coefficient
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CYCLOHEXYLAMINE 108-91-8	1.2
Diethylaminoethanol (DEAE) 100-37-8	0.21

Other adverse effects No information available

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 Do not reuse container.

14. TRANSPORT INFORMATION

UN/ID No.	2920
Proper shipping name	CORROSIVE LIQUID, FLAMMABLE, N.O.S. (Cyclohexylamine, Diethylaminoethanol)
Hazard Class	8
Subsidiary class	3
Packing Group	II
Description	5 Liters (1.3 Gallons) and Less may be Classed as LTD. QTY.

15. REGULATORY INFORMATION

International Inventories

TSCA	Complies
DSL/NDL	Complies
EINECS/ELINCS	Complies
ENCS	Does not Comply
IECSC	Complies
KECL	Does not Comply
PICCS	Complies
AICS	Complies

Legend:

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory
DSL/NDL - 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

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

SARA 311/312 Hazard Categories

ACUTE HEALTH HAZARD	YES
CHRONIC HEALTH HAZARD	YES
FIRE HAZARD	YES
Sudden release of pressure hazard	No
REACTIVE HAZARD	No

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)

CERCLA

This material, as supplied, contains one or more substances regulated as a hazardous substance under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302)

PRODUCT COMPOSITION CAS#	Hazardous Substances RQs (in LBS)	U.S. - CERCLA/SARA - Section 302 Extremely Hazardous Substances TPQs
CYCLOHEXYLAMINE 108-91-8	-	10000

US State Regulations**California Proposition 65**

This product does not contain any Proposition 65 chemicals

U.S. State Right-to-Know Regulations

PRODUCT COMPOSITION CAS#	NJRTK:	MARTK:	PARTK:
CYCLOHEXYLAMINE 108-91-8	0576	Listed	Listed
Diethylaminoethanol (DEAE) 100-37-8	Listed	Listed	Listed

U.S. EPA Label Information

EPA Pesticide Registration Number Not applicable

16. OTHER INFORMATION**NFPA**

Health hazards 3

Flammability 2

Instability 0

Physical and Chemical Properties ALKALI

HMIS

Health hazards 3

Flammability 2

Physical hazards 0

Personal protection D

Revision Date

01/30/2015

Revision Note

Disclaimer

The information provided in this Material 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 SDS ***