



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 BFW-85, Boiler Feedwater Treatment (formerly BFW85G)

Other means of identification

Product code 107280

UN/ID No. 2357

Synonyms NONE

Recommended use of the chemical and restrictions on use

Recommended Use Water treatment chemical. 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)

Skin corrosion/irritation	Category 1 Sub-category B
Serious eye damage/eye irritation	Category 1
Carcinogenicity	Category 2
Reproductive Toxicity	Category 2
Flammable liquids	Category 3

Label elements

Emergency Overview

DANGER

Hazard statements

Causes severe skin burns and eye damage
Suspected of causing cancer
Suspected of damaging fertility or the unborn child
Flammable liquid and vapor

**Appearance** Light yellow liquid.**Physical state** Liquid**Odor** Slight 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
 Do not breathe dust/fume/gas/mist/vapors/spray
 Wash face, hands and any exposed skin thoroughly after handling
 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

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: Rinse mouth. DO NOT induce vomiting
 In case of fire: Use CO₂, dry chemical, or foam for extinction

Precautionary Statements - Storage

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

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 if swallowed

Unknown Acute Toxicity 5.53% of the mixture consists of ingredient(s) of unknown toxicity

3. COMPOSITION/INFORMATION ON INGREDIENTS

PRODUCT COMPOSITION CAS#	CAS No.	%	TRADE SECRET
CYCLOHEXYLAMINE	108-91-8	1 - 10	*
Diethylaminoethanol (DEAE)	100-37-8	1 - 10	*
Nitrilotriacetic Acid Trisodium Salt	18662-53-8	1 - 5	*
Sodium bisulfite	7631-90-5	1 - 5	*

*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: Rinse mouth. DO NOT induce vomiting.

Most important symptoms and effects, both acute and delayed

Symptoms	Drowsiness. Dizziness.
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Indication of any immediate medical attention and special treatment needed

Note to physicians	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 Caution: Use of water spray when fighting fire may be inefficient.

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

CORROSIVE MATERIAL. Avoid exposure to mist and splashes. 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.
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Environmental precautions

Environmental precautions	See Section 12 for additional ecological information.
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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.

7. HANDLING AND STORAGE

Precautions for safe handling**Advice on safe handling**

Do not breathe dust/fume/gas/mist/vapors/spray. Wash thoroughly after handling. Use only in well-ventilated areas. Avoid contact with eyes, skin and clothing. DO NOT pressurize, weld, or heat containers.

Conditions for safe storage, including any incompatibilities**Storage Conditions**

Keep containers tightly closed in a dry, cool and well-ventilated place. Keep away from heat, sparks, flame and other sources of ignition (i.e., pilot lights, electric motors and static electricity). Vapors are heavier than air and may tend to collect in low or poorly ventilated areas resulting in possible fire and/or inhalation hazard. Empty containers may retain product residue, follow MSDS/label precautions even after container is emptied. Do not store in metal containers.

Incompatible materials

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

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
Sodium bisulfite 7631-90-5	TWA: 5 mg/m ³	(vacated) TWA: 5 mg/m ³	-

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

If exposure limits are exceeded or irritation is experienced, NIOSH/MSHA approved respiratory protection should be worn. Positive-pressure supplied air respirators may be required for high airborne contaminant concentrations. Respiratory protection must be provided in accordance with current local regulations.

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 yellow liquid.	Odor	Slight Amine
Color	Light Yellow	Odor threshold	No information available

<u>Property</u>	<u>Values</u>	<u>Remarks • Method</u>
pH	10.8	
Melting point/freezing point	No information available	
Boiling point / boiling range	100 °C / 212 °F	
Flash point	57 °C / 135 °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	1.060 - 1.072	
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):	186.6
Density	8.88 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

Keep away from heat, sparks, and flame.

Incompatible materials

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

Hazardous Decomposition Products

Oxides of Carbon. Oxides of Nitrogen. Sulfur dioxide.

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Product Information	Causes severe skin burns and eye damage May be harmful if swallowed
Inhalation	May cause irritation of respiratory tract. May cause drowsiness or dizziness. Causes burns.

Eye contact	Corrosive to the eyes and may cause severe damage including blindness.
Skin contact	Causes burns.
Ingestion	May be 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)	-
Nitritotriacetic Acid Trisodium Salt 18662-53-8	= 920 mg/kg (Rat)	-	> 5 mg/L (Rat) 4 h
Sodium bisulfite 7631-90-5	= 1420 mg/kg (Rat)	-	-

Information on toxicological effects

Symptoms No information available.

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

Sensitization May cause allergic reaction in sulfite sensitive individuals.
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	-	-
Nitritotriacetic Acid Trisodium Salt 18662-53-8	-	Group 2B	-	X
Sodium bisulfite 7631-90-5	-	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 Respiratory system.
STOT - repeated exposure No information available.
Aspiration hazard No information available.

Numerical measures of toxicity - Product Information

Unknown Acute Toxicity 5.53% of the mixture consists of ingredient(s) of unknown toxicity

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

ATEmix (oral) 3531 mg/kg
ATEmix (dermal) 7023 mg/kg
ATEmix (inhalation-dust/mist) 17.1 mg/l

12. ECOLOGICAL INFORMATION**Ecotoxicity**

5.58% 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

Nitrilotriacetic Acid Trisodium Salt 18662-53-8	-	72 - 133: 96 h Oncorhynchus mykiss mg/L LC50 static 560 - 1000: 96 h Oryzias latipes mg/L LC50 semi-static 560 - 1000: 96 h Oryzias latipes mg/L LC50 470: 96 h Pimephales promelas mg/L LC50 static 252: 96 h Lepomis macrochirus mg/L LC50 175 - 225: 96 h Lepomis macrochirus mg/L LC50 static 93 - 170: 96 h Pimephales promelas mg/L LC50 flow-through 560 - 1000: 96 h Poecilia reticulata mg/L LC50 semi-static 114: 96 h Pimephales promelas mg/L LC50 560 - 1000: 96 h Poecilia reticulata mg/L LC50	560 - 1000: 48 h Daphnia magna mg/L LC50
Sodium bisulfite 7631-90-5	-	-	119: 48 h Daphnia magna mg/L EC50

Persistence and degradability

No information available.

Bioaccumulation

No information available.

PRODUCT COMPOSITION CAS#	Partition coefficient
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.	2357
Proper shipping name	CYCLOHEXYLAMINE MIXTURE
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	Does not Comply
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
Sodium bisulfite 7631-90-5	5000	

US State Regulations

California Proposition 65

This product contains the following Proposition 65 chemicals

PRODUCT COMPOSITION CAS#	CA PROP 65:
Nitriotriacetic Acid Trisodium Salt - 18662-53-8	Listed

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
Nitrilotriacetic Acid Trisodium Salt 18662-53-8		Listed	
Sodium bisulfite 7631-90-5	Listed	Listed	Listed

U.S. EPA Label Information

EPA Pesticide Registration Number Not applicable

16. OTHER INFORMATION**NFPA**

Health hazards 3

Flammability 2

Instability 1

Physical and Chemical Properties CORR

HMIS

Health hazards 3

Flammability 2

Physical hazards 1

Personal protection X

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 *****