SAFETY DATA SHEET

Issue Date: October 10, 2010 Revision Date: May 28, 2015 Version 1.

1. IDENTIFICATION

Product Identifier:

Product Name **DIRL-HIB II**

Other Means of Identification:

SDS # BW-004

UN/ID Not regulated

Recommended Use of the Chemical and Restriction on Use:

Recommended Use: Corrosion inhibitor

Details of the Supplier of Safety Data Sheet:

Blue Wave Ultrasonics
960 South Rolff Street
Davenport, Iowa 52802
1-800-373-0144

Emergency Telephone Number

Emergency Telephone (24 Hr) INFOTRAC 1-352-323-3500 (International)
1-800-535-5053 (North America)

2. HAZARDS IDENTIFICATION

Appearance: Pink colored powder Physical State: Solid Odor: Surfactant

Classification	
Acute toxicity – Oral	Category 4
Skin corrosion/irritation	Category 2
Serious eye damage/eye irritation	Category 2B

Signal Word:

Warning

Hazard Statements:

Harmful if swallowed
Causes skin irritation
Causes serious eye irritation

Precautionary Statements - Prevention:

Do not eat, drink or smoke when using this product.
Wear protective gloves and eye protection.
Wash face, hands and any exposed skin thoroughly after handling.

Precautionary Statements –Response:
IF IN EYES: Rinse cautiously with water for several minutes. If irritation persists: Get medical attention.
IF ON SKIN (or hair): Take off all contaminated clothing. Rinse skin with water. If skin irritation or rash occurs: Get medical attention.
IF INHALED: Move to fresh air and keep in a position for breathing.
IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. Get medical attention if you feel unwell.

Precautionary Statements - Storage
Store locked up. Keep container tightly closed.

Precautionary Statements –Disposal
Dispose of contents/container at an approved disposal plant.
Other Hazards
Combining amines and sodium nitrite may form nitrosamines under certain conditions. Nitrosamines have caused cancer is some animal studies. This product has not been tested for nitrosamines.

Percent of components Unknown Acute Toxicity
Oral 0%, Dermal 15%, Inhalation 0%

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS No.	Weight %
Triethanolamine	102-71-6	<45
Sodium Nitrite	7632-00-0	10-15

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

General Advice: Provide this SDS to medical personnel for treatment.

Eye Contact: Flush with large amounts of water for 15 minutes. Gently lift eye lids and flush immediately and continuously with copious amounts of water. Immediate medical attention is required.

Skin contact: Remove contaminated clothing. Rinse with water for 15 minutes. If irritation/redness persist consult physician.

Inhalation: Remove exposed person to fresh air and support breathing as needed. Get medical attention immediately.

Ingestion: Rinse mouth. Do not induce vomiting. Call a physician immediately.

Most important symptoms and effects: May cause skin and eye irritation. Corneal damage is unlikely. Prolonged skin contact is unlikely to result in absorption of harmful amounts.

Note to physicians: Treatment is symptomatic and supportive. Sodium nitrite forms methemoglobin is blood stream. Treat accordingly.

5. FIRE FIGHTING MEASURES

Flash Point: Noncombustible. Flash Point method: N/D Burning Rate: N/D
Autoignition Temperature: Noncombustible.
LEL: N/D UEL: N/D Flammability Classification: N/D
Extinguishing Media: Use agent suitable for surrounding fire.
Unusual Fire or Explosion Hazards: N/D
Hazardous Combustion Products: N/D
Fire-Fighting Instructions: Do not release runoff to sewers or waterways.
Fire-Fighting Equipment: As in any fire, wear a self-contained breathing apparatus (SCBA) with a full face piece operated in positive-pressure mode.

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions:	Wear protective clothing as described in Section 8 of this safety data sheet.
Environmental Precautions:	See section 12 for additional Ecological Information.
Methods of Containment:	Prevent further leakage or spillage if safe to do so.
Method for Clean-up:	Scoop material into suitable container for disposal. Discard any product, residue, disposable container or liner in full compliance with federal, state, and local regulations. For waste disposal, see section 13 of the SDS.

7. HANDLING AND STORAGE

Handling:	Handle in accordance with good industrial hygiene and safety practices. Use personal protection recommended in Section 8. Keep out of reach of children. Avoid contact with skin, eyes or clothing. Use with adequate ventilation. Do not eat or drink while handling.
Storage:	Store in tightly closed container. Store locked up.
Incompatible Materials:	Strong oxidizing agents. Strong acids.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

	ACGIH TLV	OSHA PEL	NIOSH IDLH
Triethanolamine 102-71-6	5 mg/m^3		

Appropriate engineering controls: Adequate ventilation, Safety showers, Eye wash stations.

Individual protection measures:

Eye/Face Protection:	Use safety glasses or goggles.
Skin and Body Protection:	Chemical impervious gloves. Boots, aprons needed for protection against spill / splashes.
Respiratory Protection:	Ensure adequate ventilation, especially in confined areas.
General Hygiene:	Avoid contact with skin, eyes, and clothing. Wash hands after handling. Remove any contaminated clothing. If needed take first aid action shown in section 4 of this SDS.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State: Liquid
Appearance: Amber Liquid
Color: Amber
Odor: Surfactant
Odor Threshold: Not determined

Property	Values	Property	Values
pH (1% Solution)	11.0		
Melting Point/Freezing Point	Not determined	Boiling Point/Boiling Range	Not determined
Flash Point	Will not burn	Evaporation Rate	Not determined
Flammability (solid, Gas)	Not determined	Upper Flammability Limits	Not determined
Lower Flammability Limit	Not determined	Vapor Pressure	Not determined
Specific Gravity (H2O=1)	1.19	Water Solubility (wt/wt)	100%
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.
Polymerization: Hazardous polymerization will not occur.
Conditions to Avoid: Keep out of reach of children.
Incompatible Chemicals: Strong oxidizing agent. Strong acids. Soft metals.
Hazardous Decomposition Products: Carbon monoxide. Carbon dioxide (CO2) Nitrous oxides.

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Eye Contact	Causes serious eye irritation.
Skin Contact	Causes skin irritation.
Inhalation	No adverse effects due to inhalation are expected.
Ingestion	Harmful if swallowed.

Component Information

	Oral LD50	Dermal LD50	Inhalation LC50
Triethanolamine 102-71-6	=6400 mg/kg (Rat)	>2000 mg/kg (Rabbit)	(No Deaths @ Saturation)
Sodium Nitrite 7632-00-0	=88 mg/kg (Rat)		5.5 mg/m3/4hr (Rat)

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: Combining amines and sodium nitrite may form nitrosamines under certain conditions. Nitrosamines have caused cancer is some animal studies. This product has not been tested for nitrosamines.

STOT: No data available.

Numerical measures of toxicity

Not determined

Percent of components Unknown Acute Toxicity

Oral 0%, Dermal 15%, Inhalation 0%

12. ECOLOGICAL INFORMATION

Ecotoxicity
Harmful to aquatic organisms

Component Information

	Algae/aquatic Plants	Fish	Toxicity to Microorganisms	Crustacea
Triethanolamine 102-71-6	512: 72 h Scenedesmus mg/L, ErC50 growth rate inhibition	11800: 96 h Pimephales promelas mg/L, LC50	>1000: 3 h activated sludge Respiration Inhibtion	16: 21 d Daphnia magna mg/L LOEC
Sodium Nitrite 7632-00-0		0.19:96 h Oncorhynchus mykiss mg/L, LC50		

Persistence /Degradability
Triethanolamine; Passes OECD test(s) for readily biodegradability.
Biodegradation 89% at 14 days; 97% at 28 days.

Bioaccumulation
Triethanolamine: Bioaccumulation potential is low (BCF<100 or Log Pow<3)
Bioconcentration Factor (BCF)<3.9; Cyprinus carpio (Carp); Measured.

Mobility
Potential for mobility in soil is very high (Koc between 0 and 50).
Mackay Level 1 Fugacity Model: Air<1%; Water>99%; Biota<1%; Soil<1%; Sediment<1%.

Other Adverse Effects
No information available for Triethanolamine or Sodium Nitrite.

13. DISPOSAL CONSIDERATIONS

Water 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. TRANSPORTATION INFORMATION

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

DOT: Not regulated

IATA: Not regulated

IMDG: Not regulated

15. REGULATORY INFORMATION

International Inventories

Not determined

US FEDERAL

CERCLA

	Hazardous Substance RQs	CERCLA/SARA RQs	Reportable Quantity (RQ)
Sodium Nitrite 7632-00-0	100 lb		RQ 100 lb final RQ RQ 45.4 kg final RQ

SARA 313

	CAS No	Weight-%	SARA 313-Threshold Values %
Sodium Nitrite 7632-00-0	7632-00-0	10-15	1.0

CWA (Clean Water Act)	CWA-Reportable Quantities	CWA-Toxic Pollutant
Sodium Nitrite 7632-00-0	100 lb	No
	CWA-Priority Pollutant No	CWA-Hazardous Substances Yes

U.S. State Regulations

U.S. State Right-to Know Regulations

	New Jersey	Massachusetts	Pennsylvania
Sodium Nitrite 7632-00-0	X	X	X

16. OTHER INFORMATION

NFPA	Health Hazards	Flammability	Instability	Special Hazards
	1	0	0	
HMIS	Health Hazards	Flammability	Physical Hazards	Personal Protection
	1	0	0	B

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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 guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification.

End of Safety Data Sheet