Safety Data Sheet
Dirl-Hib II

SECTION 1: Identification

1.1 GHS Product identifier

Product name	Dirl-Hib II
Product number	Dilr-Hib II
Brand	Blue Wave Ultrasonics

1.3 Recommended use of the chemical and restrictions on use

Rust preventative rinse additive and corrosion inhibitor.

1.4 Supplier's details

Name	Blue Wave Ultrasonics
Address	209 West 76th Street Davenport Iowa 52806 USA
Telephone	(563)-322-0144
Fax	(563)-322-7180

SECTION 2: Hazard identification

2.1 Classification of the substance or mixture

GHS classification in accordance with: OSHA (29 CFR 1910.1200)

- Acute toxicity, oral, Cat. 4
- Skin corrosion/irritation, Cat. 2
- Eye damage/irritation, Cat. 2B

2.2 GHS label elements, including precautionary statements

Pictograms

Signal word **Warning**

Hazard statement(s)
Harmful if swallowed
Causes skin irritation
Causes eye irritation

Precautionary statement(s)

Prevention	Wash thoroughly after handling. Do not eat, drink or smoke when using this product. Wear protective gloves.
Response	IF SWALLOWED: Call a POISON CENTER or Doctor if you feel unwell. Rinse mouth. IF ON SKIN: Wash with plenty of water. If skin irritation occurs: Get medical attention. Take off contaminated clothing and wash it before reuse. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.
Disposal	Dispose of contents and container in accordance with local laws.

SECTION 3: Composition/information on ingredients

3.2 Mixtures

Hazardous components

Component	CAS no.	Concentration
Triethanolamine (EC no.: 203-049-8)	**102-71-6**	**< 42 % (weight)**
Sodium nitrite (EC no.: 231-555-9; Index no.: 007-010-00-4)	**7632-00-0**	**< 16 % (weight)**

Proprietary chemical identity and percentage composition have been withheld as trade secrets.

SECTION 4: First-aid measures

4.1 Description of necessary first-aid measures

General advice	Consult a physician. Show this safety data sheet to the doctor in attendance.
If inhaled	Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.
In case of skin contact	Rinse with plenty of water. Get medical attention if irritation develops and persists.
In case of eye contact	Rinse thoroughly with plenty of water for at least 15 minutes. Get medical attention if symptoms occur.
If swallowed	Rinse mouth. If vomiting occurs naturally, have victim lean forward to reduce the risk of aspiration. Do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Call a poison center or doctor if you feel unwell. Acute and delayed symptoms and effects: Harmful if swallowed. May cause gastrointestinal irritation. Signs/symptoms may include abdominal pain, stomach upset, nausea, vomiting and diarrhea.

4.2 Most important symptoms/effects, acute and delayed
May cause skin and eye irritation. Corneal damage is unlikely. Prolonged skin contact is unlikely in absorption and harmful amounts.

4.3 Indication of immediate medical attention and special treatment needed, if necessary
Treatment is to be symptomatic and supportive, Sodium nitrite forms methemoglobin in blood stream. Treat accordingly.

SECTION 5: Fire-fighting measures

5.1 Suitable extinguishing media
Use agent suitable for surrounding fire.

5.2 Specific hazards arising from the chemical
Ammonium oxides, Nitrous oxides

5.3 Special protective actions for fire-fighters
Wear self-contained breathing apparatus for firefighting if necessary.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures
Use personal protective equipment. Avoid breathing vapours, mist or gas. Ensure adequate ventilation. Remove all sources of ignition. Evacuate personnel to safe areas. Beware of vapours accumulating to form explosive concentrations. Vapours can accumulate in low areas. For personal protection see section 8.

6.2 Environmental precautions
Should not be released into the environment.

6.3 Methods and materials for containment and cleaning up
SMALL SPILLS: Contain and absorb with absorbent material and place into containers for later disposal. Wash site of spillage thoroughly with water. LARGE SPILLS: Dike far ahead of spill to prevent further movement. Recover by pumping or by using a suitable absorbent material and place into containers for later disposal. Dispose in suitable waste container.

Reference to other sections
For disposal see section 13.

SECTION 7: Handling and storage

7.1 Precautions for safe handling
Use personal protective equipment as required. Keep container closed when not in use. Never return spills in original containers for re-use. Keep out of the reach of children.

7.2 Conditions for safe storage, including any incompatibilities
Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage.

Specific end use(s)
Apart from the uses mentioned in section 1.2 no other specific uses are stipulated.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

CAS: 102-71-6 (EC: 203-049-8)
Triethanolamine
Cal/OSHA (US): 5 mg/m3 PEL inhalation

8.2 Appropriate engineering controls

Avoid contact with skin, eyes and clothing. Wash hands before breaks and immediately after handling the product.

8.3 Individual protection measures, such as personal protective equipment (PPE)

Eye/face protection
Face shield and safety glasses. Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

Skin protection
Distribution, Workplace and Household Settings: No special protective equipment required. Product Manufacturing Plant (needed at Product-Producing Plant ONLY): Protective gloves.

Body protection
Choose body protection in relation to its type, to the concentration and amount of dangerous substances, and to the specific work-place., The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Respiratory protection
Distribution, Workplace and Household Settings: No special protective equipment required. Product Manufacturing Plant (needed at Product-Producing Plant ONLY): In case of insufficient ventilation wear suitable respiratory equipment.

Thermal hazards
No data available

Control banding approach
P264 - Wash exposed skin thoroughly after handling.

Environmental exposure controls
Do not let product enter drains.

SECTION 9: Physical and chemical properties

Basic physical and chemical properties

Appearance	Clear liquid
Color	Light Amber
Odor	Surfactant
Odor threshold	Not Determined
Melting point/freezing point	Not Determined
Boiling point or initial boiling point and boiling range	Not Determined
Flammability	Will not burn
Lower and upper explosion limit/flammability limit	Not Determined

Flash point	Will not burn
Explosive properties	Not Determined
Auto-ignition temperature	Will not burn
Decomposition temperature	Not Determined
Oxidizing properties	Not Determined
pH	11.0
Kinematic viscosity	Not Determined
Solubility	Miscibile
Partition coefficient n-octanol/water (log value)	Not Determined
Vapor pressure	Not Determined
Evaporation rate	Not Determined
Density and/or relative density	1.19
Relative vapor density	Not Determined

SECTION 10: Stability and reactivity

10.1 Reactivity
None under normal use conditions.

10.2 Chemical stability
Stable under recommended storage conditions.

10.3 Possibility of hazardous reactions
None under normal use conditions.

10.4 Conditions to avoid
Avoid storing in direct sunlight and avoid extremes of temperature.

10.5 Incompatible materials
Triethanolamine: Acids, Oxidizing agents
Sodium nitrite: Acids, Powdered metals, Ammonia, Cyanides, Amines, Activated carbon

10.6 Hazardous decomposition products
Triethanolamine: Hazardous decomposition products formed under fire conditions. - Carbon oxides, Nitrogen oxides (NOx).
Other decomposition products - No data available.
In the event of fire: see section 5.

SECTION 11: Toxicological information

Information on toxicological effects

Acute toxicity
The ATE (oral) of the mixture is: 625 mg/kg bw
P270 - Do not eat, drink or smoke when using this product.
P301+P312 - IF SWALLOWED: Call a POISON CENTER or doctor if you feel unwell.

Skin corrosion/irritation
Irritating to skin.
P264 - Wash exposed skin thoroughly after handling.

Serious eye damage/irritation
Causes eye irritation.
P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing.

Respiratory or skin sensitization
May cause an allergic skin reaction
P332+P313 - If skin irritation occurs: Get medical advice/attention.

Germ cell mutagenicity
Based on available data, classification data are not met.

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

Reproductive toxicity
Based on available data, classification data are not met.

Summary of evaluation of the CMR properties
No data available.

Specific target organ toxicity (STOT) - single exposure
No data available

Specific target organ toxicity (STOT) - repeated exposure
No data available

Aspiration hazard
No data available

Additional information
Sodium nitrite: Headache, Nausea, Incoordination., Absorption into the body leads to the formation of methemoglobin which in sufficient concentration causes cyanosis. Onset may be delayed 2 to 4 hours or longer.

SECTION 12: Ecological information

Toxicity
No data available on product.

Persistence and degradability
Triethanolamine: Passed OECD tests for readily biodegradablity. Biodegradation of 89% at 14 days.

Bioaccumulative potential
No data available on product.

Mobility in soil
No data available on product.

Results of PBT and vPvB assessment
PBT/vPvB assessment not available as chemical safety assessment not required/not conducted.

Endocrine disrupting properties
No data available.

Other adverse effects
An environmental hazard cannot be excluded in the event of unprofessional handling or disposal. Very toxic to aquatic life with long lasting effects.

SECTION 13: Disposal considerations

Disposal methods

Product disposal
Dispose of contents and container in accordance with the local/regional/national/international regulations. Products covered by this SDS, in their original form, when disposed as waste, are considered non hazardous waste according to Federal RCRA regulations (40 CFR 261). Disposal should be in accordance with local, state and federal regulations. Solutions of diluted detergent in the course of use, may be allowed to be flushed down sewer. First check with your local water treatment plant. Recycling is undiluted scrap product.

Packaging disposal
Dispose of as unused product.

Waste treatment
The organic content is readily biodegradable and the salt content will revert to salts of nitrate.

SECTION 14: Transport information

DOT (US)
Not dangerous goods

IMDG
Not dangerous goods

IATA
Not dangerous goods

SECTION 15: Regulatory information

15.1 Safety, health and environmental regulations specific for the product in question

Pennsylvania Right To Know Components
Chemical name: ETHANOL, 2,2',2''-NITRILOTRIS-
CAS number: 102-71-6

Chemical name: NITROUS ACID, SODIUM SALT
CAS number: 7632-00-0
Listing note: E-environmental hazard.

SARA 302 Components
No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

SARA 311/312 Hazards
Chronic Health Hazard

Reactivity Hazard, Acute Health Hazard, Chronic Health Hazard

Canadian Domestic Substances List (DSL)
Chemical name: Ethanol, 2,2',2''-nitrilotris-
CAS number: 102-71-6

Chemical name: Nitrous acid, sodium salt
CAS number: 7632-00-0

US EPA TSCA public inventory
Chemical name: Triethanolamine
CAS number: 102-71-6

Chemical name: Sodium nitrite
CAS number: 7632-00-0

SARA 313 Components
The following components are subject to reporting levels established by SARA Title III, Section 313:
Sodium nitrite
CAS-No. 7632-00-0

New Jersey Right To Know Components
Common name: SODIUM NITRITE
CAS number: 7632-00-0

Massachusetts Toxic Use Reduction Act (TURA) list
Chemical name: Sodium nitrite
CAS number: 7632-00-0
TRI listing: X-reportable; CERCLA listing: X-reportable; TURA-only listing: no; de minimis concentration threshold: 1 percent. Changes: CERCLA chemical added RY1993

EU Table of Harmonised Entries (Annex VI to CLP)
Chemical name: Sodium nitrite
CAS number: 7632-00-0

HMIS Rating

Dirl-Hib II	
HEALTH	1
FLAMMABILITY	0
PHYSICAL HAZARD	0
PERSONAL PROTECTION	B

NFPA Rating

SECTION 16: Other information

DISCLAIMER: The information above is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigation to determine the suitability of information for their particular purposes. In no event shall Blue Wave Ultrasonics be liable for any claims, losses, or damages of any third party or for lost profits or any special, indirect, incidental, consequential or exemplary damages, whatsoever arising, even if Blue Wave Ultrasonics has been advised of the possibility of such damages.