

**Section 1: Product & Company Information**

**Product Identifier:** GlycoHib+™ I-50 Hydronic System Corrosion Inhibitor

**Other Means of Identification**

Product Number: No data available.

**Recommended Use and Restrictions on Use**

Recommended Use: Heat transfer fluid multi-metal corrosion inhibitor.  
Restrictions on Use: Not known.

**Manufacturer / Importer / Supplier / Distributor Information**

**Company Name:** CORECHEM Inc.

**Address:** 4320 Greenway Drive  
Knoxville, TN 37934  
USA

**Information Telephone Number:** 1-865-524-4239

**Fax Number:** 1-865-524-3375

**Website:** www.corecheminc.com

**Contact Person:** Regulatory Manager

**E-mail:** regulatory@corecheminc.com

**Emergency Phone Number:** Chemtrec® 1-800-424-9300 / Outside USA 1-703-527-3887 (monitored 24 hours/day)

**Section 2: Hazards Identification**

**GHS Hazard Classification(s)**

In accordance with OSHA Hazard Communication Standard 29 CFR 1910.1200 (HazCom 2012).

**Physical Hazard(s)**

Oxidizing, Liquids - 2  
Corrosive to Metals - 1

**Health Hazard(s)**

Acute Toxicity, Oral - 3  
Corrosion/Irritation, Skin - 1A  
(Corrosion)Damage/Irritation, Eye - 1

**Environmental Hazard(s)**

Aquatic, Acute - 1  
Aquatic, Chronic - 1

**Label Elements**

**Signal Word**

**DANGER**

**Hazard Symbol(s)**



**Hazard Statement(s)**

H272: May intensify fire; oxidizer.  
H290: May be corrosive to metals.  
H301: Toxic if swallowed.  
H314: Causes severe skin burns and eye damage.  
H318: Causes serious eye damage.  
H400: Very toxic to aquatic life.

**Precautionary Statements**

**General**

Not applicable.

**Prevention**

P210: Keep away from open flames. No smoking.  
P220: Keep/Store away from combustible materials.  
P221: Take any precaution to avoid mixing with combustibles.  
P234: Keep only in original container.  
P260: Do not breathe the mist.  
P264: Wash face, hands and any exposed skin thoroughly after handling.  
P270: Do not eat, drink or smoke when using this product.  
P273: Avoid release to the environment.

P280: Wear protective gloves, clothing and eye & face protection.

**Response**

P301 + P310: IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.  
 P301 + P330 + P331: IF SWALLOWED: rinse mouth. Do NOT induce vomiting.  
 P303 + P361 + P353: IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.  
 P304 + P340: IF INHALED: Remove to fresh air and keep at rest in a position comfortable for breathing.  
 P305 + P351 + P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
 P310: Immediately call a POISON CENTER or doctor/physician.  
 P321: Specific treatment (see supplemental first aid instructions on this label).  
 P330: Rinse mouth.  
 P363: Wash contaminated clothing before reuse.  
 P370 + P378: In case of fire: Use suitable extinguishing media for extinction.  
 P390: Absorb spillage to prevent material damage.  
 P391: Collect spillage.

**Storage**

P405: Store locked up.  
 P406: Store in corrosive resistant container with a resistant inner liner.  
 P410: Protect from sunlight.

**Disposal**

P501: Dispose of contents/container to an appropriate treatment and disposal facility in accordance with applicable laws and regulations, and product characteristics at time of disposal.

**Hazard(s) not otherwise classified (HNOC)**

None known.

**Section 3: Composition/Information on Ingredients**

**Mixture**

Chemical Identity <sup>2</sup>	Common Name/Synonym(s)	CAS # <sup>3</sup>	Weight %	Impurity or Stabilizing Additive
Sodium Tetraborate	Borax	1303-96-4	≤5%	No
Sodium Nitrite	-	7632-00-0	≤20%	No
Sodium Hydroxide	Caustic Soda	1310-73-2	≤5%	No
1H-Benzotriazole, 4(or 5)-Methyl-, Sodium Salt	-	64665-57-2	≤2%	No

- Information regarding the composition and the percent ranges of the mixtures ingredients are not presented as it Confidential Business Information (CBI). Where a medical emergency exists (as determined by medical professional), timely disclosure of CBI is assured. The information omitted pertains to only the names of the substances and the concentration in the mixture (product) and can only be requested by a doctor/physician or Local/State/Provincial or Federal Authority.
- Non-hazardous ingredients are not presented as to protect the proprietary formula of the product.
- "—"Indicates ingredient is a mixture and contains multiple ingredients or may have no identifying CAS number.

**Section 4: First-Aid Measures**

**General Information**

Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. In the case of accident or if you feel unwell, seek medical advice immediately (show the label where possible). Wash contaminated clothing before reuse.

**Inhalation**

Move to fresh air. Get medical attention if symptoms persist. If breathing stops, provide artificial respiration. For breathing difficulties, oxygen may be necessary

**Skin Contact**

Immediately flush with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Get medical attention if irritation persists after washing. Wash contaminated clothing before reuse. Destroy or thoroughly clean contaminated shoes. IF ON CLOTHING: Rinse immediately contaminated clothing and skin with plenty of water before removing clothes.

**Eye Contact**

Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Call a physician or poison control center immediately.

**Ingestion**

Call a physician or poison control center immediately. Do not induce vomiting without advice from poison control center. Never give liquid to an unconscious person.

**Most important symptoms/effects, acute and delayed**

**Symptoms**

Toxic if swallowed. Irritating to eyes, respiratory system and skin.

**Indication of immediate medical attention and special treatment needed**

**Hazards**

No data available.

**Treatment**

Treat symptomatically. Symptoms may be delayed.

**Section 5: Fire-Fighting Measures**

### General Fire Hazards

Oxidizing material. Noncombustible, but may support combustion. Use only outdoors or in a well-ventilated area. Contaminated work clothing should not be allowed out of the workplace.

### Suitable (and Unsuitable) Extinguishing Media

#### Suitable Extinguishing Media

Water or water spray in early stages of fire. Foam.

#### Unsuitable Extinguishing Media

Dry chemical. Straight Streams of Water

### Specific Hazards Arising from the Chemical

Oxidizer

### Special Protective Equipment and Precautions for Firefighters

#### Special Fire-Fighting Equipment Procedures

Move containers from fire area if you can do so without risk. Use water spray to keep fire-exposed containers cool. Cool containers exposed to flames with water until well after the fire is out. In case of major fire and large quantities: Evacuate area. Fight fire remotely due to the risk of explosion.

#### Special Protective Equipment for Fire-Fighters

Firefighters must use standard protective equipment including flame retardant coat, helmet with face shield, gloves, rubber boots, and in enclosed spaces, SCBA.

## Section 6: Accidental Release Measures

### Personal Precautions, Protective Equipment and Emergency Procedures

Use personal protective equipment. See Section 8 of the SDS for Personal Protective Equipment. Keep unauthorized personnel away. Ventilate closed spaces before entering them. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area). Evacuate area.

### Methods and Materials for Containment and Clean-Up

Sweep up and place in a clearly labeled container for chemical waste. Clean surface thoroughly to remove residual contamination. Use only non-sparking tools.

### Notification Procedures

Dike for later disposal. Prevent entry into waterways, sewer, basements or confined areas. Inform authorities if large amounts are involved.

### Environmental Precautions

Do not contaminate water sources or sewer. Prevent further leakage or spillage if safe to do so. Avoid discharge into drains, water courses or onto the ground.

## Section 7: Handling and Storage

### Precautions for Safe Handling

Do not taste or swallow. Wash hands thoroughly after handling. Avoid contact with eyes. Keep away from food, drink and animal feeding stuffs. Keep away from combustible material. Do not eat, drink or smoke when using the product. Do not smoke, use open fire or other sources of ignition. Use personal protective equipment as required. See Section 8 of the MSDS for Personal Protective Equipment. Observe good industrial hygiene practices. Keep away from heat/sparks/open flames/hot surfaces. No smoking. Wear protective gloves/protective clothing/eye protection/face protection. Take any precaution to avoid mixing with combustibles. Wear fire/flame resistant/retardant clothing.

### Conditions for Safe Storage, including any Incompatibilities

Keep container tightly closed in a cool, well-ventilated place. Keep container dry. Store away from incompatible materials.

## Section 8: Exposure Controls/Personal Protection

### Control Parameters

#### Occupational Exposure Limits

Chemical Identity	Type	Value	Source
Disodium Tetraborate Decahydrate	TWA	2.0 mg/m <sup>3</sup>	US. ACGIH Threshold Limit Values
Disodium Tetraborate Decahydrate	STEL	6.0 mg/m <sup>3</sup>	US. ACGIH Threshold Limit Values
Sodium Hydroxide	PEL	2 mg/m <sup>3</sup>	US OSHA Table Z-1
Sodium Hydroxide	Ceiling	2 mg/m <sup>3</sup>	US. ACGIH Threshold Limit Values

#### Biological Limit Values

The product does not contain any relevant quantities of hazardous materials with assigned biological limit values.

### Appropriate Engineering Controls

No data available.

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

#### General Information

Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. An eye wash and safety shower must be available in the immediate work area. Use explosion-proof ventilation equipment.

#### Eye/Face Protection

Wear safety glasses with side shields (or goggles) and a face shield.

#### Skin Protection

### Hand Protection

Wear appropriate chemical resistant gloves.

### Other

Wear appropriate chemical resistant clothing.

### Respiratory Protection

If engineering controls do not maintain airborne concentrations below recommended exposure limits (where applicable) or to an acceptable level (in countries where exposure limits have not been established), an approved respirator must be worn. Air-purifying respirator with an appropriate, government approved (where applicable), air-purifying filter, cartridge or canister. Contact health and safety professional or manufacturer for specific information

### Hygiene Measures

When using, do not eat, drink or smoke. Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants. Discard contaminated footwear that cannot be cleaned. Wash hands before breaks and immediately after handling the product. Wash contaminated clothing before reuse. Avoid contact with eyes, skin, and clothing.

## Section 9: Physical and Chemical Properties

### Appearance:

Physical State: Liquid  
Color: Bright Pink/Red

### Odor:

No data available.

### Odor Threshold:

No data available.

### pH:

13.68 to 13.72

### Melting Point/Freezing Point:

Approx. 32 °F

### Initial Boiling Point and Boiling Range:

Approx. 212 °F

### Flash Point:

Not applicable.

### Evaporation Rate (butyl acetate=1):

No data available.

### Flammability (solid, gas):

No data available.

### Upper/Lower Limit on Flammability or Explosive Limits

Flammability Limit – Upper: Not applicable.  
Flammability Limit – Lower: Not applicable.  
Explosive Limit – Upper: Not applicable.  
Explosive Limit – Lower: Not applicable.

### Vapor Pressure:

No data available.

### Vapor Density (air =1):

No data available.

### Relative Density (water=1):

1.145 to 1.192

### Solubility(ies):

Solubility in water: Complete  
Solubility (other): No data available.

### Partition coefficient (n-octanol/water):

No data available.

### Auto-Ignition Temperature:

No data available.

### Decomposition Temperature:

No data available.

### Viscosity:

No data available.

### Other Information:

Molecular Weight: Mixture  
Formula: Mixture

## Section 10: Stability and Reactivity

### Reactivity

Contact with combustible material may cause fire.

### Chemical Stability

The substance is hygroscopic and will absorb water by contact with the moisture in the air.

### Possibility of Hazardous Reactions

Hazardous polymerization does not occur.

### Conditions to Avoid

Heat, sparks, flames. Contact with incompatible materials.

### Incompatible Materials

Reducing agents. Flammable/combustible material. Organic compounds.

### Hazardous Decomposition Products

No data available.

## Section 11: Toxicological Information

### Information on routes of exposure

**Ingestion:** Toxic if swallowed.

**Inhalation:** May be harmful if inhaled.

**Skin Contact:** May cause irritation.

**Eye Contact:** Causes serious eye irritation

**Information on Toxicological Effects**

**Acute Toxicity (List all possible routes of exposure)**

**Oral**

Sodium Tetraborate: LD50 (Rat): 4,500 – 5,000 mg/kg  
Sodium Hydroxide: LD50 (Rat): 300 – 500 mg/kg  
Sodium Nitrite: LD 50 (Rat): 85 mg/kg

**Dermal**

Sodium Tetraborate: LD50 (Rabbit): 10,000 mg/kg  
Sodium Hydroxide: LD50 (Rabbit): > 2 g/kg

**Inhalation**

Sodium Nitrite: LC 50 (Rat, 4 h): 5.5 mg/l

**Repeated Dose Toxicity**

Sodium Hydroxide: (Mouse): 40 mg/kg, intraperitoneal

**Skin Corrosion/Irritation**

May cause skin irritation

**Serious Eye Damage/Eye Irritation**

Causes serious eye irritation.

**Respiratory/Skin Sensitization**

Not a skin sensitizer.

**Carcinogenicity**

**IARC Monographs on the Evaluation of Carcinogenic Risks to Humans**

No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

**US. National Toxicology Program (NTP) Report on Carcinogens**

No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

**US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1052)**

No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

**Germ Cell Mutagenicity**

**In Vitro**

No mutagenic components identified.

**In Vivo**

No mutagenic components identified.

**Reproductive Toxicity**

Presumed human reproductive toxicant

**Specific Target Organ Toxicity – Single Exposure**

None known.

**Specific Target Organ Toxicity – Repeated Exposure**

None known.

**Aspiration Hazard**

Not classified.

**Other Effects**

None known.

**Section 12: Ecological Information**

**Ecotoxicity**

**Acute Hazards to the Aquatic Environment**

**Fish**

Sodium Tetraborate: LC50 (Goldfish (*Carassius auratus*), 72 h): 178 mg/l  
Sodium Hydroxide: LC50 (Bluegill (*Lepomis Macrochirus*), 48 h): 99 mg/l  
Sodium Hydroxide: LC50 (Mosquitofish (*Gambusia Affinis Affinis*), 96 h): 125 mg/l  
Sodium Nitrite: LC 50 (Rainbow trout, donaldson trout (*Oncorhynchus mykiss*), 96 h): 0.19 - 0.24 mg/l Mortality

**Aquatic Invertebrates**

Sodium Tetraborate: EC50 (Water flea (*Daphnia magna*), 48 h): 1,085 – 1,402 mg/l  
Sodium Nitrite: EC 50 (Greasyback shrimp (*Metapenaeus ensis*), 48 h): 16.14 - 26.61 mg/l Intoxication  
Sodium Nitrite: LC 50 (Water flea (*Daphnia magna*), 24 h): 43.6 mg/l Mortality  
Sodium Nitrite: LC 50 (Indian prawn (*Penaeus indicus*), 48 h): 15.37 mg/l Mortality

**Toxicity to Aquatic Plants**

Sodium Tetraborate: IC50 (Green algae (*Desmodesmus subspicatus*), 96 h): 158 mg/l

**Chronic Hazards to the Aquatic Environment**

**Fish**

No data available.

**Aquatic Invertebrates**

No data available.

**Toxicity to Aquatic Plants**

No data available.

**Persistence and Degradability**

**Biodegradation**

There are no data on the degradability of this product.

**BOD/COD Ratio**

No data available.

**Bioaccumulative Potential**

**Bioconcentration Factor (BCF)**

No data available on bioaccumulation.

**Partition Coefficient n-octanol / water (log Kow)**

No data available.

**Mobility in Soil**

No data available.

**Other Adverse Effects**

No data available.

## Section 13: Disposal Considerations

**Disposal Instructions**

Collect and reclaim or dispose in sealed containers at licensed waste disposal site. This material and its container must be disposed of as hazardous waste. Do not allow this material to drain into sewers/water supplies. Do not contaminate ponds, waterways or ditches with chemical or used container. Dispose of contents/container in accordance with local/regional/national/international regulations.

**Contaminated Packaging**

Handle contaminated packages in the same way as the substance itself. Emptied containers may retain hazardous residue and explosive vapors. Keep away from heat, sparks, and flames. Do not cut, puncture, or weld on or near this container. Follow label warnings until container is thoroughly cleaned or destroyed.

## Section 14: Transportation Information

**US Department of Transportation (DOT)**

UN Number: UN3139

UN Proper Shipping Name: Oxidizing liquid, n.o.s.

Technical Name: (contains sodium nitrite)

Hazard Class: 5.1

Subsidiary Hazard Risk: -

Packing Group: III

DOT Label/Placard Exemptions: Not determined

Special Provisions: 62, 127, A2, IB2

Packaging Exceptions: 49CFR 173.152

Packaging Non-Bulk: 49CFR 173.203

Packaging Bulk: 49CFR 173.241

Reportable Quantity (RQ): -

Marine Pollutant: No

Poison Inhalation Hazard: No

Special precautions for user: Transport within user's premises: always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

Emergency Response Guidebook (ERG) #: 140

*Important Note: Shipping descriptions may vary based on mode of transport, quantities, package size, and/or origin and destination. Consult your company's Hazardous Materials/Dangerous Goods expert for information specific to your situation.*

## Section 15: Regulatory Information

**US Federal Regulations**

**Toxic Substance Control Act (TSCA), Chemical Substance Inventory, Section 8(b)**

This product or ingredient(s) are listed on the TSCA inventory. Any impurities present in this product are exempt from listing.

**Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) Hazardous Substance List (40 CFR 302.4)**

The following chemical(s) in this material are subject to reporting levels established by CERCLA:

Sodium Hydroxide (CAS# 1310-73-2)

Sodium Nitrite (CAS# 7632-00-0)

**Clean Air Act (CAA), Section 112(r)**

No chemical(s) in this material are subject to the reporting requirements of CAA.

**Emergency Planning and Community Right-To-Know Act (EPCRA)**

**EPCRA 302 Extremely Hazardous Substance**

No chemical(s) in this material are subject to the reporting requirements of SARA Title III, Section 302.

### EPCRA 304 Emergency Response Notification

No chemical(s) in this material are subject to the reporting requirements of SARA Title III, Section 304.

### EPCRA 311/312 Emergency and Hazardous Materials Reporting

Fire Hazard: No  
Sudden Release of Pressure: No  
Reactive: No  
Acute (Immediate) Health Hazard: Yes  
Chronic (Delayed) Health Hazard: No

### EPCRA 313 Toxic Chemical Release Inventory (TRI) Reporting

The following chemical(s) in this material are subject to reporting levels established by SARA Title III, Section 313:  
Sodium Nitrite (CAS# 7632-00-0)

### US State Regulations

#### California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65)

This product contains a chemical known to the State of California to cause birth defects or other reproductive harm.

*Important Note: Due to the changing nature of regulatory requirements, the information in this document should NOT be considered all-inclusive or authoritative. Users should make their own investigations to determine the suitability of the information for their particular purposes. International, Federal, State and Local regulations should be consulted to determine compliance with all required reporting requirements.*

## Section 16: Other Information

### Hazardous Materials Identification System (HMIS®) Classification

Health Hazard: 2  
Chronic Health Hazard: /  
Flammability: 0  
Physical Hazard: 1  
(Hazard Rating: 0 – Minimal / 1 – Slight / 2 – Moderate / 3 – Serious / 4 – Severe)

### National Fire Protection Association (NFPA 704) Rating

Health Hazard: 2  
Fire Hazard: 0  
Reactivity Hazard: 1  
Special: OX  
(Hazard Rating: 0 – Minimal / 1 – Slight / 2 – Moderate / 3 – Serious / 4 – Severe)

Prepared by: Regulatory Manager  
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Revision Date: -  
Revisions: -

### Key to Abbreviations and Acronyms

ATE - Acute Toxicity Estimate	ACGIH - American Conference of Industrial Hygienists
BCF - Bioconcentration Factor	AIHA - American Industrial Hygiene Association
EC50 - Effective concentration, 50%	BEI - Biological Exposure Indices
IDHL - Immediately Dangerous to Life and Health	CAS - Chemical Abstracts Service
Kg - Kilogram	DOT - US Department of Transportation
l - Liter	EPA - US Environmental Protection Agency
lb - Pound	GHS - Globally Harmonized System of Classification and Labelling of Chemicals
LC50 - Lethal Concentration, 50%	IARC - International Agency for Research on Cancer
LD50 - Lethal Dose, 50%	IATA - International Air Transport Association
mg - milligram	IBC - Intermediate Bulk Container
ml - milliliter	IMDG - International Maritime Dangerous Goods
N/A - Not Applicable	NIOSH - National Institute for Occupational Safety and Health
N/D - Not Determined	NTP - National Toxicology Program
PEL - Permissible Exposure Limit	OSHA - US Occupational Health and Safety Administration
REL - Recommended Exposure Limit	SARA - US EPA Superfund Amendments and Reauthorization Act
STEL - Short-term Exposure Limit	TSCA - US EPA Toxic Substances Control Act
TWA - Time weighted average	UN - United Nations

### References

HSDB® - Hazardous Substances Data Bank

### Disclaimer

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