


SAFETY DATA SHEET



Section 1. Identification of Substance and Supplier

Product Name	IntelliBond®C
Alternative Names	IntelliBond®C II Dicopper Chloride Trihydroxide Copper Hydroxychloride Micronutrients tribasic copper chloride (TBCC) Basic Copper Chloride IntelliBond®C-58
Recommended Use of Chemical	Animal feed additive
Use Restrictions	IntelliBond®C is intended for use as a source of copper in animal feeds or research purposes only.
Manufacturer's Information	Micronutrients 1550 Research Way Indianapolis, Indiana 46231 317-486-5880
Emergency Phone Number	<u>CHEMTREC</u> (800)424-9300 <u>Micronutrients</u> (317) 486-5880

Section 2. Hazards Identification

GHS Classification of Substance	Category 4: Acute Toxicity Acute Category 3: Hazardous to Aquatic Environment
National or Regional Information	Although this product is classified by the Global Harmonization System as an Acute Category 3, Hazardous to Aquatic Environment, it is not considered to be an environmentally hazardous substance or marine pollutant as defined in the International Maritime Dangerous Goods Code.
GHS Label Elements	WARNING  Harmful if Swallowed Harmful to Aquatic Life
Other Hazards	None known

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Section 3. Composition / Information on Ingredients

Ingredient Name	CAS Number	EC Number	Percent of Total Weight
<i>Basic Copper Chloride</i> ($Cu_2(OH)_3Cl$)	1332-65-6	215-572-9	>90%
<i>Inert Ingredients</i>	Not Applicable	Not Applicable	<10%

Section 4. First Aid Measures

Eye	Wash with plenty of water at least for 15 minutes. If irritation persists, seek medical advice.
Skin	Wash exposed skin with soap and water. If irritation persists, seek medical advice.
Ingestion	Contact Poison Control and occupational physician
Inhalation	Remove individual to fresh air, and seek medical advice.
Note to Physician	Symptoms of intake of harmful levels of copper include: convulsions, vomiting, abdominal pain, diarrhea and yellow skin (jaundice) Treat symptomatically.

Section 5. Firefighting Measures

Suitable extinguishing media	Utilize compatible fire extinguishing media, including water, and any dry media carbon dioxide (CO_2).
Fire and Explosion Hazards	Material is not considered combustible. Material may melt with decomposition under fire conditions.
PPE and precautions for firefighters	Self-contained breathing apparatus may be appropriate when fighting fires with copper compounds present. Prevent extinguishing media from reaching water bodies and sewage.

Section 6. Accidental Release Measures

Suggested PPE, Equipment and Procedures	Wear disposable coveralls, FFP2/P2 filter mask, rubber gloves, and protective eye goggles or total face protection.
Environmental Precautions	Prevent the product from entering water courses or sewers.
Methods and materials for containment and cleanup	Cover drains if possible. Lightly sweep or vacuum material to collect. Place in a clean, dry container.

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Section 7. Handling and Storage

Handling Precautions	Store in a cool, dry place. Practice good personal hygiene when handling product. Avoid dust formation. Do not breathe dust. Handle in a well-ventilated area or wear adequate respiratory protection (FFP2/P2 filter mask). Avoid contact with skin and eyes using working clothes, gloves and protective glasses. Do not eat, smoke or drink during use. After use keep the packaging tightly closed.
Storage Precautions	Do not allow bags to become wet, or exposed to fire or extreme heat. Keep in sealed containers away from humidity and sunlight. Store the product in a well-ventilated warehouse away from flammable products. Keep out of the reach of children, animals and un-authorized personnel.

Section 8. Exposure Controls / Personal Protection

Occupational Exposure Limit Values	There are no TLV established specifically for basic copper chloride. The values provided are for Copper Dust. ACGIH 8 Hr TLV – 1mg/m ³ OSHA 8 hr PEL – 1mg/m ³
Engineering Controls	Local or general area ventilation to control dust.
Individual Protection Measures	Protective eyewear is prudent, especially in dusty areas Good hygiene is recommended to limit skin exposure Respiratory protection should be selected appropriate to the dustiness of the work environment

Section 9. Physical and Chemical Properties

Appearance	Green particulate (particle size may range from 20-300 microns)
Odor	Odorless
Odor Threshold	Not applicable
pH	6.0 – 7.5 in water, measured by EPA method SW846-9045
Melting Point / Freezing Point	Melting Point – 482°F (250°C) Freezing Point – Not Applicable
Initial Boiling Point and Boiling Range	Not Applicable
Flash Point	Not Applicable
Evaporation Rate	Not Applicable
Flammability	Non-Flammable
Upper / Lower flammability or explosive limits	Not Applicable
Vapor Pressure	Not Applicable
Vapor Density	Not Applicable

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Relative Density	3.4-3.6
Solubility	Insoluble in water, Soluble in acids and strong bases.
Partition Coefficient; n-octanol / water	Not Applicable
Auto-Ignition Temperature	Not Applicable
Decomposition Temperature	482°F

Section 10. Stability and Reactivity

Chemical Stability	Stable
Possibility of Hazardous Reactions	Will not occur
Conditions to Avoid	None Known
Incompatible Materials	None Known
Hazardous Decomposition Products	Will not decompose under normal use conditions.

Section 11. Toxicological Information

Exposure Routes	Dermal absorption, inhalation, ingestion
Toxicological characteristics and symptoms	None Known. This material was subjected to a research study involving feeding this material to animals in varying concentrations greater than normal animal feed additive concentrations. The results of the study indicate that the animals were able to utilize this material, with no adverse health effects, in place of the minerals they had been accustomed to being fed.
Delayed Effects	None Known
Immediate Effects	Symptoms of intake of harmful levels of copper include: convulsions, vomiting, abdominal pain, diarrhea, and yellow skin (jaundice). Fever from metal inhalation, Possible eye and skin irritation.
Chronic Effects	None Known
Acute Toxicity Estimates	The oral LD ₅₀ for copper hydroxychloride, rat is 1,440 mg/kg.

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Section 12. Ecological Information

Ecotoxicity	The LC ₅₀ measures the concentration at which 50% of a species exposed to a product will die as a result of the exposure.		
	Species	LC₅₀ Result	Time Period
	<i>Ceriodaphnia dubia</i> (crustacean)	29.7 mg/l	48-hr
	<i>Pseudokirchneriella subcapitata</i> (green algae)	11.1 mg/l	72-hr
	<i>Scenedesmus obliquus</i> (green algae)	101 mg/l	96-hr
	<i>Pimephales promelas</i> (freshwater fish)	39.2 mg/l	96-hr
Persistence and degradability	The product is not environmentally persistent. It will release copper as a trace mineral when it reacts with acids, bases, or complexing reagents.		
Bio-accumulative potential	Copper is an essential trace mineral which is needed to sustain normal metabolic functions. Copper is not bio-accumulative, and is readily cleared and excreted.		
Mobility in soil	Not Established		
Other adverse effects	None Known		

Section 13. Disposal Considerations

Description of waste residues	Waste residues are not anticipated outside of commercial packaging or unintended spills of material.
Safe Handling and Disposal methods	Dispose of contents / containers in accordance with local / regional / international regulations.

Section 14. Transport Information

UN Number	Material is not regulated by DOT / ADR
UN Proper Shipping Name	Material is not regulated by DOT / ADR
Transport Hazard Class(es)	Material is not regulated by DOT / ADR
Packing Group	Material is not regulated by DOT / ADR
Marine Pollutant	No

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Special Precautions	Not Applicable
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Section 15. Regulatory Information

Applicable Regulations	SARA – Acute Health Hazard SARA – Chronic Health Hazard SARA Title III component: Copper Tier I/Tier II (40 CFR 370.25) reporting required if present and on-site in quantities of copper-contained is equal to or exceed 10,000 pounds. SARA Title III – Section 313 Form R / TRI Reportable Chemical (Copper Compounds)
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Section 16. Other

Disclaimer	Although reasonable care has been taken in the preparation of this document, we extend no warranties and make no representations as to the accuracy or completeness of the information contained therein, and assume no responsibility regarding the suitability of this information for the user's intended purposes or the consequences of its use. Each individual should make a determination as to the suitability of the information for their particular purpose(s).
SDS preparation	Steve Lucas, Carla Jackson
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