


NFPA HAZARD RATING				U.S. TRANSPORT SUMMARY	
0	Least				
1	Slight	2	Health		Not regulated by the U.S. DOT as a hazardous material. See Section 14 for additional information.
2	Moderate	0	Flammability		
3	High	0	Reactivity		
4	Severe				

SECTION 1: IDENTIFICATION	
Product Name: RUFFIN-TUFF™ Granular Copper 5% CFIA Registration #: 900065B Product ID/Unity #: 10125584, 10125884 Common Name: Granular copper fertilizer Chemical Description: Copper lignosulfonate Recommended Uses: Fertilizer product – See product label for full directions for use. Restrictions for Use: See product label for any potential restrictions on use.	Manufactured For: WINFIELD SOLUTIONS, LLC P. O. Box 64589 St. Paul, MN 55164-0589
MEDICAL EMERGENCY TELEPHONE NUMBER: 1-877-424-7452 (24hrs) Non-Emergency Business Inquiries: 1-855-494-6343 Mon – Fri 8am – 5pm (Central Standard Time)	
FOR EMERGENCY, SPILL, LEAK, FIRE, EXPOSURE, OR ACCIDENT, CALL: CHEMTREC 1-800-424-9300 (24 hours)	

SECTION 2: HAZARDS IDENTIFICATION			
EMERGENCY OVERVIEW: Dark brown granules with no noticeable odor. Harmful if swallowed. Causes eye and skin irritation.			
POTENTIAL HEALTH EFFECTS:			
Eyes: Causes moderate but temporary eye irritation which may include redness and itching.			
Skin: Causes moderate skin irritation. Prolonged or repeated exposure may lead to reddening of skin, rash, dermatitis or other skin reactions.			
Inhalation: Inhalation of dust may cause mild irritation of the upper respiratory tract.			
Ingestion: May cause upset of the gastric system.			
Preexisting Conditions: None known			
Chronic Health Effects: None known			
Carcinogenicity	NTP: Not listed	IARC: Not listed	OSHA: Not listed
OSHA HCS 2012 CLASSIFICATION: Eye Irritation Category 2A; Skin Irritation Category 2; Acute Oral Toxicity Category 4			
SIGNAL WORD: WARNING			
HAZARD STATEMENTS: Causes serious eye irritation. Causes skin irritation. Harmful if swallowed.			
Percent of product with unknown toxicity: 0%			
PRECAUTIONARY STATEMENTS:			
Prevention: Wash hands thoroughly after handling. Wear protective gloves, eye and face protection. Do not eat, drink or smoke when using this product.			

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RUFFIN-TUFF™ Granular Copper 5%

Response:	If in eyes: Rinse cautiously with water for 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical attention. If on skin: Wash with plenty of water. If skin irritation occurs: Get medical attention. Take off contaminated clothing and wash before reuse. If Swallowed: Immediately call a poison control center (1-877-424-7452) or doctor for treatment advice. Rinse mouth.
Storage:	See Section 7 for storage information.
Disposal:	Dispose of contents/container in accordance with Federal, state and local regulations.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

Ingredient	% (wt)	CAS Reg. #
Copper lignosulfonate	0 – 19.5%	61827-83-6
Copper humate	0 – 17.5%	Not available
Ammonium sulfate	24.0 – 27.0%	7783-20-2

*Ingredients not specifically listed are non-hazardous and are considered to be confidential business information under 29 CFR 1910.1200(i).

See Section 8 for exposure limits.

SECTION 4: FIRST AID MEASURES

Inhalation:	Remove person from contaminated area to fresh air and assist breathing as needed. Seek medical attention if irritation occurs.
Ingestion:	Seek medical attention or call a poison control center immediately for treatment advice. Do not induce vomiting unless instructed to do so by a poison control center or doctor. Do not give anything by mouth to an unconscious person.
Eyes:	Flush eyes with clean water for at least 15 minutes. Lift eyelids to facilitate irrigation. If present, remove contact lenses after 5 minutes and continue rinsing. Seek medical attention if irritation persists.
Skin:	Remove contaminated clothing and wash before re-using. Flush skin with water and then wash with soap and water. Seek medical attention if irritation persists.

SECTION 5: FIRE FIGHTING MEASURES

Suitable Extinguishing Media: Water fog, foam, dry chemical, carbon dioxide (CO₂), water spray
Special Fire Fighting Procedures: Wear NIOSH/MSHA approved self-contained breathing apparatus and full bunker gear. Dike area to prevent runoff and contamination of water sources. Dispose of fire control water later. Avoid breathing vapors; keep upwind.
Hazardous Combustion Products: Oxides of sulfur and other toxic gases, such as ammonia, may be formed in a fire situation. Carbon monoxide and other asphyxiates may form as well.
Unusual Fire and Explosion Hazards: None known

SECTION 6: ACCIDENTAL RELEASE MEASURES

Personal Precautions: Refer to Section 8 for personal protective equipment to be worn during containment and clean-up of a spill involving this product.
Environmental Precautions: Keep spilled product and any rinse water from entering sewers or waterways.
Methods for Containment: Contain spilled product by sweeping up if a small spill or by diking area with sand or earth if a large spill.
Methods for Clean-up: Vacuum, scoop or sweep up material and place in a container for disposal. If product is uncontaminated, spilled material may be applied at the rate recommended on the label. Never return spills to original containers for re-use. After removal of spilled product, flush contaminated area thoroughly with water.
Other Information: None known

SECTION 7: HANDLING AND STORAGE			
<p>Handling: Avoid breathing dust. Use only outdoors or in a well-ventilated area. Immediately clean up spills that occur during handling. Keep containers closed when not in use. Practice good hygiene after using this material, especially before eating, drinking, smoking, using the toilet, or applying cosmetics.</p> <p>Storage: Store in a cool, dry area away from children, feed and food products. Store away from incompatible materials. Protect packaging from physical damage. Protect from exposure to fire conditions.</p> <p>Minimum Storage Temperature: Not applicable</p> <p>Other Precautions: Consult Federal, state and local laws and regulations pertaining to storage.</p>			

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION			
Exposure Guidelines			
Component:	OSHA PEL	ACGIH TLV	NIOSH REL
Particulates not otherwise classified	15 mg/m ³ (total dust) 5 mg/m ³ (respirable)		
Copper dusts & mists (as Cu)	1 mg/m ³	1 mg/m ³	1 mg/m ³
<p>Respiratory Protection: If dust concentration exceeds permissible levels, wear NIOSH approved air-purifying respirator with cartridges/canisters approved for general particulates.</p> <p>Engineering Controls: Local Exhaust: Provide general or local exhaust ventilation systems to maintain airborne concentrations below OSHA PELs or other specified exposure limits. Local exhaust ventilation is preferred.</p> <p>Protective Gloves: Wear chemically protective gloves to prevent exposure to skin.</p> <p>Eye Protection: Wear chemical goggles or safety glasses and full face shield. Contact lenses are not eye protective devices. An emergency eyewash or water supply should be readily available to the work area.</p> <p>Other Protective Clothing or Equipment: Wear long-sleeve shirt, long pants and shoes plus socks to prevent skin contact.</p> <p>Work/Hygienic Practices: Never eat, drink, nor use tobacco in work areas. Practice good hygiene after using this material, especially before eating, drinking, smoking, using the toilet, or applying cosmetics.</p>			

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES			
Physical State:	Solid	Specific Gravity (H₂O=1):	<1.0
Vapor Pressure (mm Hg):	Not determined	Bulk Density:	52 - 53 lbs/ft ³
Vapor Density (Air=1):	Not applicable	Melting Point/Freezing Point:	Not determined
Solubility in Water (wt %):	54%	Boiling Point/Range:	Not determined
Viscosity:	Not applicable	pH:	Not determined
Appearance and odor:	Dark brown granules with no noticeable odor	Flash Point:	Non-combustible

SECTION 10: STABILITY AND REACTIVITY	
<p>Reactivity: None known</p> <p>Chemical Stability: Product is stable at ambient temperature and pressure, under normal storage and handling conditions.</p> <p>Possibility of Hazardous Reactions: Will not occur.</p> <p>Conditions to Avoid: Avoid excessive heat and/or damp areas.</p> <p>Incompatible Materials: Strong acids and bases</p> <p>Hazardous Decomposition Products: Oxides of sulfur and other toxic gases, such as ammonia, may be formed in a fire situation. Carbon monoxide and other asphyxiates may form as well.</p>	

SECTION 11: TOXICOLOGICAL INFORMATION

ACUTE TOXICITY

Eye Effects: Causes moderate but temporary eye irritation.
Skin Effects: Estimated LD50 >2,000 mg/kg; Contact causes skin irritation.
Acute Inhalation Effects: Estimated LC50 is not available, however based upon component data it is unlikely that this product is toxic by inhalation.
Acute Oral Effects: Estimated LD50 = 1,318 mg/kg
Specific Target Organ Toxicity: None known

CHRONIC TOXICITY

Chronic Effects: None known
Carcinogenicity: No component is anticipated to have carcinogenic effects.
Mutagenicity: No component is anticipated to have mutagenic effects.
Teratogenicity: No component is anticipated to have teratogenic effects.
Reproductive Toxicity: No component is anticipated to have effects on the reproductive system.

POTENTIAL HEALTH EFFECTS:

Eyes: Causes moderate but temporary eye irritation which may include redness and itching.
Skin: Causes moderate skin irritation. Prolonged or repeated exposure may lead to reddening of skin, rash, dermatitis or other skin reactions.
Inhalation: Inhalation of dust may cause mild irritation of the upper respiratory tract.
Ingestion: May cause upset of the gastric system.

SECTION 12: ECOLOGICAL INFORMATION

ENVIRONMENTAL SUMMARY: Not determined

ECOTOXICITY DATA:

Fish Acute and Prolonged Toxicity: Not determined
Aquatic Invertebrate Acute Toxicity: Not determined
Aquatic Plant Toxicity: Not determined
Bird Acute and Prolonged Toxicity: Not determined
Honeybee Toxicity: Not determined

ENVIRONMENTAL EFFECTS:

Soil Absorption/Mobility: Not determined
Persistence and degradability: Not determined
Bioaccumulative Potential: Not determined
Other adverse effects: Not determined

SECTION 13: DISPOSAL CONSIDERATIONS

Waste: Dispose of in accordance with applicable Federal, state and local laws and regulations.
Container: Ensure all product has been emptied from the sack/bag. Dispose of emptied container in accordance with applicable Federal, state and local laws and regulations.
RCRA Characteristics: It is the responsibility of the individual disposing of this product to determine the RCRA classification and hazard status of the waste.

SECTION 14: TRANSPORT INFORMATION

DOT (Ground): This product is not regulated by the U.S. Department of Transportation as a hazardous material for ground shipment.
IMDG (Sea): Not determined
IATA (Air): Not determined
TDG (Canada): This product is not regulated by TDG as a hazardous material for ground shipment.

SECTION 15: REGULATORY INFORMATION

TSCA Inventory: All components are listed or are exempt from listing on the TSCA inventory.

SARA Title III Information:

Section 302 - Extremely hazardous substances: None listed

Section 311/312 – Hazard Categories: Immediate (Acute)

Section 313 – The following chemicals are subject to the reporting requirements of Section 313 of Title III, Superfund Amendments and Reauthorization Act of 1986 and 40 CFR 372:

Copper compounds (<21.0%)

CERCLA - This product contains the following chemicals which have a reportable quantity (RQ) under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA):

Copper compounds are considered to be CERCLA hazardous substances though no RQ is established.

California Proposition 65: This product does not contain any chemicals known to the state of California to cause cancer and/or reproductive harm.

U.S. State Worker and Community Right-To-Know (RTK) Information (CT, IL, MA, MN, NH, NJ, PA, RI):

Chemical Name	CAS #	State(s)
Ammonium sulfate	7783-20-2	MA, NJ, PA, RI

WHMIS Classification: D2B

SECTION 16: OTHER

Disclaimer: The information presented herein is based on available data from reliable sources and is correct to the best of WinField Solutions' knowledge. WinField Solutions, LLC makes no warranty, express nor implied, regarding the accuracy of the data or the results obtained from the use of this product. Nothing herein may be construed as recommending any practice or any product in violation of any law or regulations. The user is solely responsible for determining the suitability of any material or product for a specific purpose and for adopting any appropriate safety precautions. We disclaim all liability for injury or damage stemming from any improper use of the material or product described herein.

Revision Date: November 03, 2015

Supersedes document dated: February 13, 2008

Sections Revised: All