


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:	Gradual-N® 28-0-0
EPA Registration #:	Exempt
Common Name:	Slow release nitrogen
Chemical Description:	Urea-triazone solution
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	
This chemical is considered hazardous according to the OSHA Hazard Communication Standard 2012 (29 CFR 1910.1200). OSHA HCS 2012 CLASSIFICATION: Eye Irritation Category 2A; Skin Irritation Category 2	
SIGNAL WORD: WARNING	
HAZARD STATEMENTS: Causes serious eye irritation Causes skin irritation	
PRECAUTIONARY STATEMENTS:	
Prevention:	Wash hands, face and any exposed skin thoroughly after handling. Wear protective gloves, eye and face protection.
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.
Storage:	See Section 7 for storage information.
Disposal:	See Section 13 for disposal information.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS		
Ingredient	% (wt)	CAS Reg. #
Urea - triazone solution	100.00	Proprietary
*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. Seek medical attention if irritation occurs.
Ingestion:	Seek medical attention or call a poison control center for treatment advice if you feel unwell. 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:	Carbon dioxide, dry chemical, foam, water spray or fog
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:	Irritating fumes may be evolved at elevated temperatures.
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:	Do not allow spilled product to enter sewers or waterways.
Methods for Containment:	Contain spilled product by diking area with sand or earth.
Methods for Clean-up:	Cover contained spill with an inert absorbent material such as sand, vermiculite or other appropriate material. Vacuum, scoop, or sweep up material and place in a container for disposal. Do not place spilled material back in original container.

SECTION 7: HANDLING AND STORAGE	
Handling:	Ensure adequate ventilation during handling and use. Avoid contact with eyes and skin. 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.
Storage:	Store in cool, dry and well-ventilated areas away from children, food and feed products. Store away from incompatible substances. Protect packaging from physical damage. Protect from exposure to fire. This product is not compatible with Copper, Zinc or their alloys including brass, bronze or galvanized materials. These materials should not be utilized in handling systems or storage containers for this product.
Minimum Storage Temperature:	35°F
Other Precautions:	Consult Federal, state and local laws and regulations pertaining to storage.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION			
Exposure Guidelines			
Component:	OSHA PEL	ACGIH TLV	NIOSH REL
No components have an exposure limit			
Respiratory Protection: For most well-ventilated conditions, no respiratory protection should be needed. If airborne concentrations exceed exposure limits or if irritation is experienced, use a NIOSH approved air-purifying respirator with cartridges/canisters approved for general particulates.			
Engineering Controls:	Provide general or local exhaust ventilation systems to maintain airborne concentrations below OSHA PELs or other specified exposure limits. Local exhaust ventilation is preferred. Keep eyewash/safety shower in areas where product is handled.		
Protective Gloves: Wear chemically protective gloves to prevent exposure to skin.			
Eye Protection: Wear chemical safety goggles or safety glasses and full face shield. Contact lenses are not protective eye devices.			
Other Protective Clothing or Equipment: Wear long-sleeve shirt, long pants and shoes plus socks to prevent skin contact.			
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.			

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES			
Physical State:	Liquid	Specific Gravity (H ₂ O=1):	1.28 - 1.29
Vapor Pressure (mm Hg):	Not determined	Density (lbs/gallon):	10.7 lbs/gallon @ 68°F (typical)
Vapor Density (Air=1):	Not determined	Melting Point/Freezing Point:	<0°F (<-17.8°C)
Solubility in Water (wt %):	Complete	Boiling Point/Range:	219°F (104°C)
Viscosity:	67.5 Cp @ 25°C	pH:	9 - 11 (typical)
Appearance and odor:	Clear liquid with a slight amine odor	Flash Point:	Not applicable

SECTION 10: STABILITY AND REACTIVITY	
Reactivity: None known	
Chemical Stability: Product is stable at ambient temperature and pressure, under normal storage and handling conditions.	
Possibility of Hazardous Reactions: Strong oxidizers such as nitrates or chlorates can cause explosive mixtures if heated to dryness.	
Conditions to Avoid: Avoid excessive heat and freezing temperatures. Avoid strong oxidizers and acids or acidic materials.	
Incompatible Materials: Avoid strong oxidizers and acids or acidic materials (see possibility of hazardous reactions above).	
This product is not compatible with Copper, Zinc or their alloys including brass, bronze or galvanized materials. These materials should not be utilized in handling systems or storage containers for this product.	
Hazardous Decomposition Products: Heating this product will evolve Ammonia. Heating to dryness will cause the production of Ammonia, and Oxides of Carbon. Ammonia may form flammable mixtures with air.	

SECTION 11: TOXICOLOGICAL INFORMATION	
<u>ACUTE TOXICITY</u>	
Eye Effects:	Causes moderate but reversible eye irritation.
Skin Effects:	Causes moderate skin irritation including redness and irritation.
Acute Inhalation Effects:	May cause minor irritation of the upper respiratory tract but is not anticipated to be acutely toxic.
Acute Oral Effects:	Estimated LD ₅₀ >2,500 mg/kg; May cause gastric upset if swallowed.
Specific Target Organ Toxicity:	None known
<u>CHRONIC TOXICITY</u>	
Chronic Effects:	None known
Carcinogenicity:	No component is anticipated to have carcinogenic effects. NTP: No listed ingredients IARC: No listed ingredients OSHA: No listed ingredients
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.

SECTION 12: ECOLOGICAL INFORMATION	
ENVIRONMENTAL SUMMARY: Not determined	
<u>ECOTOXICITY DATA:</u>	
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
<u>ENVIRONMENTAL EFFECTS:</u>	
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: Triple rinse and recycle the container or dispose of in accordance with 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: This product is not regulated by the U.S. Department of Transportation as a hazardous material for ground shipment.
(Ground)
IMDG: This product is not regulated by the IMDG code as a hazardous material for shipment by sea.
(Sea)
IATA: This product is not regulated by the IATA as a hazardous material for air shipment.
(Air)
TDG: This product is not regulated by the TDG as a hazardous material for ground shipment.
(Canada)

SECTION 15: REGULATORY INFORMATION

TSCA Inventory: All components are listed on the TSCA inventory.
SARA Title III Information:
Section 302 - Extremely hazardous substances: None listed
Section 311/312 – Hazard Categories:
 Should this product meet EPCRA 311/312 Tier reporting criteria at 40 CFR 370, refer to Section 2 of this SDS for appropriate classifications. Under the amended regulations at 40 CFR 370, EPCRA 311/312 Tier II reporting for the 2017 calendar year will need to be consistent with updated hazard classifications.
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:
 None listed
CERCLA - This product contains the following chemicals which have a reportable quantity (RQ) under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA):
 None listed
California Proposition 65: This product does not contain any chemicals known to the state of California to cause cancer and/or reproductive harm.

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.
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