

RSA MicroTech, LLC

Material Safety Data Sheet

FOR EMERGENCY, SPILL, LEAK, FIRE, EXPOSURE, OR ACCIDENT, CALL:
CHEMTREC 1-800-424-9300

Section 1 – Chemical Product and Company Identification

Product Name: **Gradual-N[®] 21-0-0-2B**

Common Name: Liquid Slow Release Nitrogen Fertilizer Solution with Boron

Chemical Description: Urea polymethylene urea with boric acid

Manufacturer's Name:
RSA MicroTech, LLC
PO Box 39
Marysville, WA 98270
Revision Date: 1-23-05

Emergency Telephone Number:
CHEMTREC 1-800-424-9300

Replaces: New

Section 2 – Composition Information on Ingredients

Derived from urea, methylene urea and boric acid

Ingredient	%	TLV or PEL
Nitrogen (N)	21	N/A
Boron (B)	2	N/A
Proprietary Ingredients	0-5	N/A
Water	Balance	N/A

NFPA HAZARD RATING:

0	Least		
1	Slight	1	Health
2	Moderate	0	Flammability
3	High	0	Reactivity
4	Severe		

Section 3 – Hazards Identification

Emergency Overview: Product may cause eye irritation upon prolonged contact.

CAUTION: Keep out of reach of children.

Route(s) of Entry: Eyes, Inhalation, Skin and Ingestion

Health Hazards (Acute and Chronic):

Inhalation: Inhalation of mist may cause irritation of the upper respiratory tract.

Eyes: Irritation of eyes.

Skin: Contact may cause irritation. Prolonged or repeated exposure may lead to reddening of skin, rash, dermatitis or other skin reactions.

Ingestion: Harmful if swallowed.

Carcinogenicity NTP: Not Listed IARC: Not Listed OSHA: Not Listed

Medical Conditions Generally Aggravated by Exposure:

None known. Preexisting respiratory conditions may be aggravated by exposure to dusts.

Section 4 – First Aid Measures

Inhalation: Remove person to fresh air and support breathing as needed. Seek medical attention if irritation persists.

Ingestion: Seek medical attention or call a poison control center immediately.

Eyes: Flush with clean water for at least 15 minutes. Lift eyelids to facilitate irrigation. Seek medical attention if eye 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 skin becomes irritated.

After first aid, get appropriate in-plant, paramedic, or community medical support.

Section 5 – Fire and Explosion Hazard Data

Flash Point: Non-combustible	Flammable Limits: Non-combustible	LEL: Not Established	UEL: Not Established
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Extinguishing Media: Materials suitable to surrounding fire.
Special Fire Fighting Procedures: Wear self-contained breathing apparatus and full bunker gear. Smoke and fumes from fire may contain hazardous components.
Hazardous Combustion Products: Toxic gases may be formed in a fire situation, carbon monoxide and other asphyxiates may form as well.
Unusual Fire and Explosion Hazards: Closed containers may explode from vapor expansion in high heat. Contain run off by diking to prevent contamination to water supplies.

Section 6 – Accidental Release Measures

Small Spills: Clean up personnel should protect against mist inhalation and skin contact. Avoid generating mists. Spills when handling should be cleaned up immediately to prevent spreading.
Large Spills: Clean up personnel should protect against mist inhalation and skin contact. Avoid generating mist.
Containment: Do not release into sewers or waterways. Dike spills to prevent contamination to water supplies. Contained spills, absorb liquids by covering with clay or other absorbent material, vacuum, scoop or sweep up waste and place in a container for disposal.

Section 7 – Precautions for Safe Handling and Use

Precautions to Be taken in Handling and Storing: Store in cool, dry areas away from children, feed and food products and sources of heat. Immediately clean up spills that occur during handling or storage. Protect from freezing keep containers closed when not in use. For maximum shelf life, store product under 77 °F
Other Precautions: Consult local, State and Federal regulations pertaining to storage and disposal.

Section 8 – Control Measures / Personal Protection

Respiratory Protection (*Specify Type*): Seek professional advice prior to respirator selection and use. Follow OSHA respirator regulations (29 CFR 1910.134) and, if necessary, wear an MSHA/NIOSH-approved respirator.

Ventilation: Local Exhaust: Provide general or local exhaust ventilation systems to maintain airborne concentrations below OSHA PELs. Local exhaust ventilation is preferred.

Protective Gloves: Wear chemically protective gloves
Eye Protection: Wear protective eyeglasses or chemical safety goggles. Contact lenses are not eye protective devices.
Other Protective Clothing or Equipment: Wear chemically protective boots, aprons and gauntlets to prevent prolonged or repeated skin contact.
Work / Hygienic Practices: Never eat, drink or smoke in work areas. Practice good hygiene after using this material, especially before eating, drinking, smoking, using the toilet or applying cosmetics.

Section 9 – Physical / Chemical Characteristics

Physical State:	Liquid	Specific Gravity (water=1)	1.245 (10.4 lbs gal.)
Solubility in Water:	Miscible	Freezing Point	32 °F
Boiling Point	212 °F	pH	8-9
Appearance and Odor	Clear very light yellow solution with slight organic / ammonia odor		

Section 10 – Reactivity Data

Stability: Product stable below 80 °F. Between 80-120 °F product may degrade over time

Chemical Incompatibilities: Strong Acids

Conditions to avoid: Avoid excessive heat.

Hazardous Decomposition Products: Toxic gases may be formed in a fire situation, carbon monoxide and other asphyxiates may form as well.

Hazardous Polymerization: Cannot occur.

Section 11 – Toxicological Information		
Eye Effects: Irritation	Chronic Effects: No unusual chronic effects	
Skin Effects: May cause irritation	Carcinogenicity: Not listed as carcinogenic	
Mutagenicity: Not listed as mutagenic		
Section 12 – Ecological Information		
Soil Absorption / Mobility: Mobile in soil profile		
Section 13 – Disposal Considerations		
Disposal: Dispose of in an approved landfill or apply at recommended label rates.		
Disposal Regulatory Requirement: Follow applicable Federal, State and local regulations.		
Section 14 – Transport Information		
Not regulated by the US DOT.		Do not ship by air!
Section 15 – Regulatory Information		
SARA TITLE II HAZARD CATEGORY:	Immediate: Yes	Delayed: No
Sudden Release of Pressure: No	Fire: No	Reactive: No
CERCLA: A spill or release of this material may trigger the emergency release reporting requirements under CERCLA (40CFR Part 300) and/or SARA Title III (40 CFR Part 355). State and local reporting requirements may differ from federal requirements. Consult for further guidance on your responsibilities under these laws: (Methylene urea , Ammonia.)		
SARA, TITLE III, SECTION 313: None Listed.		
Section 16 – Other		
Prepared by: Weldon McFarland		Reviewed by: Dennis Belau
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