

# 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<sup>®</sup> 25-0-0-0.5B**

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 64589

St Paul, MN 55164-0589

Revision Date: 4-7-06

Emergency Telephone Number:

**CHEMTREC 1-800-424-9300**

Replaces: 6-28-05

### Section 2 – Composition Information on Ingredients

Derived from urea, methylene urea and boric acid

Ingredient	%	TLV or PEL
Nitrogen (N)	25	N/A
Boron (B)	0.5	N/A
Water	Balance	N/A

### NFPA HAZARD RATING:

0	Least		
1	Slight	1	Health
2	Moderate	0	Flammability
3	High	0	Instability
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.*

<b>Section 5 – Fire and Explosion Hazard Data</b>			
<b>Flash Point:</b> Non-combustible	<b>Flammable Limits:</b> Non-combustible	<b>LEL:</b> Not Established	<b>UEL:</b> Not Established
<p><b>Extinguishing Media:</b> Materials suitable to surrounding fire.  <b>Special Fire Fighting Procedures:</b> Wear self-contained breathing apparatus and full bunker gear. Smoke and fumes from fire may contain hazardous components.  <b>Hazardous Combustion Products:</b> Toxic gases may be formed in a fire situation, carbon monoxide and other asphyxiates may form as well.  <b>Unusual Fire and Explosion Hazards:</b> Closed containers may explode from vapor expansion in high heat. Contain run off by diking to prevent contamination to water supplies.</p>			
<b>Section 6 – Accidental Release Measures</b>			
<p><b>Small Spills:</b> 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.  <b>Large Spills:</b> Clean up personnel should protect against mist inhalation and skin contact. Avoid generating mist.  <b>Containment:</b> 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.</p>			
<b>Section 7 – Precautions for Safe Handling and Use</b>			
<p><b>Precautions to Be taken in Handling and Storing:</b> 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  <b>Other Precautions:</b> Consult local, State and Federal regulations pertaining to storage and disposal.</p>			
<b>Section 8 – Control Measures / Personal Protection</b>			
<p><b>Respiratory Protection (<i>Specify Type</i>):</b> 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.</p>			
<p><b>Ventilation: Local Exhaust:</b> Provide general or local exhaust ventilation systems to maintain airborne concentrations below OSHA PELs. Local exhaust ventilation is preferred.</p>			
<p><b>Protective Gloves:</b> Wear chemically protective gloves  <b>Eye Protection:</b> Wear protective eyeglasses or chemical safety goggles. Contact lenses are not eye protective devices.  <b>Other Protective Clothing or Equipment:</b> Wear chemically protective boots, aprons and gauntlets to prevent prolonged or repeated skin contact.  <b>Work / Hygienic Practices:</b> 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.</p>			
<b>Section 9 – Physical / Chemical Characteristics</b>			
<b>Physical State:</b>	Liquid	<b>Specific Gravity (water=1)</b>	1.245 (10.4 lbs gal.)
<b>Solubility in Water:</b>	Miscible	<b>Freezing Point</b>	32 °F
<b>Boiling Point</b>	212 °F	<b>pH</b>	8-9
<b>Appearance and Odor</b>	Clear very light yellow solution with slight organic / ammonia odor		
<b>Section 10 – Reactivity Data</b>			
<p><b>Stability:</b> Product stable below 80 °F. Between 80-120 °F product may degrade over time  <b>Chemical Incompatibilities:</b> Strong Acids</p>			
<p><b>Conditions to avoid:</b> Avoid excessive heat.  <b>Hazardous Decomposition Products:</b> Toxic gases may be formed in a fire situation, carbon</p>			

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: Mike Barry

Reviewed by: Dennis Belau

**Disclaimer:** All information appearing herein is based upon data obtained from manufacturers and/or recognized technical sources. While the information is believed to be accurate, we make no representations as to its accuracy or sufficiency. Conditions of use are beyond our control, therefore users are responsible for verifying the data under their own operating conditions to determine whether the product is suitable for their particular purposes and they assume all risks of their use, handling, and disposal of this product. Users also assume all risks in regards to the publications of use of, or reliance upon, information contained therein. This information relates only to the product designated herein, and does not relate to its use in combination with any other material or process.