

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: Proforma 5-0-2	
Common Name: 5-0-2 Micronutrient fertilizer solution, liquid	
Chemical Description: Micronutrient Fertilizer Solution, liquid	
Distributed by: Agriliance LLC PO Box 64089 St Paul, MN 55164-0089	Emergency Telephone Number: CHEMTREC 1-800-424-9300
Date Prepared: 5-23-05	Revision Date: 2-7-06

Section 2 – Composition Information on Ingredients
Derived from: Potassium Citrate, Magnesium Ammonium Citrate, Copper Citrate, Ferric Ammonium Citrate, Ferric Nitrate, Sodium Borate, Manganese Nitrate, Sodium Molybdate and Zinc Citrate.

NFPA HAZARD RATING:			
0	Least		
1	Slight	2	Health
2	Moderate	0	Flammability
3	High	0	Reactivity
4	Severe		

Ingredient	%	TLV
Nitrogen (N)	5.0	N/A
Potash (K ₂ O)	2.0	N/A
Magnesium (Mg)	0.5	N/A
Boron (B)	0.02	N/A
Copper (Cu)	0.5	N/A
Iron (Fe)	5.0	N/A
Manganese (Mn)	0.5	N/A
Molybdenum (Mo)	0.02	N/A
Zinc (Zn)	0.5	N/A
Proprietary Ingredients	5 to 15%	N/A
water	balance	N/A

Section 3 – Hazards Identification			
Emergency Overview: Product is acidic and may cause oxygen deficiency in enclosed spaces, follow all OSHA regulations pertaining to enclosed space entry. See health effects below.			
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: Not Expected to be a primary skin irritant or toxic by skin contact..			
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 mists.			
Section 4 – First Aid Measures			
Inhalation: Remove person to fresh air and support breathing as needed. Seek medical attention			

Ingestion:	if irritation persists. If conscious, rinse mouth and give large quantities of water. Seek medical attention or call a poison control center immediately. Never give anything by mouth to an unconscious person.
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
Extinguishing Media: water, dry chemical, or carbon dioxide			
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: Oxides of nitrogen and other 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 placing dikes 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 a cool, dry place. Protect containers from physical damage. Product can be corrosive to tanks, pumps, meters and fittings. Store in stainless steel or polyethylene tanks with stainless steel or polypropylene/polyethylene fittings
Other Precautions: Consult local, State and Federal regulations pertaining to storage and disposal.

Section 8 – Control Measures / Personal Protection

Respiratory Protection (<i>Specify Type</i>): 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 rubber or neoprene 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)	1.34 (11.2 lbs/gal)
Freezing Point:	32 °F	Boiling Point	212 °F
Solubility in Water:	100%	pH	2.0

Appearance and Odor Clear dark green.		
Section 10 – Reactivity Data		
Stability: Product stable at room temperature in closed containers under normal storage and handling conditions. Chemical Incompatibilities: Strong bases Conditions to avoid: Avoid excessive heat. Hazardous Decomposition Products: None known Hazardous Polymerization: Does not occur.		
Section 11 – Toxicological Information		
Eye Effects: Irritation	Chronic Effects: No unusual chronic effects	
Skin Effects: May cause irritation	Carcinogenicity: Formaldehyde	
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 for ground transportation	Do not Ship by Air!	
Section 15 – Regulatory Information		
SARA TITLE II HAZARD CATEGORY:	Immediate No	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 or local reporting requirements may differ from federal requirements. Consult counsel for further guidance on your responsibilities under these laws.		
Section 16 – Other		
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