

Material Safety Data Sheet

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

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| Section 1 – Chemical Product and Company Identification | |
| Product Name: Proforma 15-0-15 SRN | |
| Common Name: Liquid Controlled Release Nitrogen Fertilizer | |
| Chemical Description: 15-2-15 containing Urea, potassium thiosulfate and Methylene Urea | |
| Manufacturer's Name: Agriliance LLC PO Box 64089 St Paul, Minnesota 55164-0089 | Emergency Telephone Number: CHEMTREC 1-800-424-9300 |
| Date Prepared: 4-30-05 | Revision Date: New |

| Section 2 – Composition Information on Ingredients | | |
|---|---------|-----|
| Derived from urea, methylene urea, potassium thiosulfate | | |
| Ingredient | % | TLV |
| Nitrogen | 15% | |
| Potash (K ₂ O) | 15% | |
| Sulfur | 10% | |
| Water | balance | |

| 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: Clear, pale yellow liquid; slight sulfur odor. Eye irritation or injury may result from exposure to this product.. | | | |
| 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. | | | |

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| Section 4 – First Aid Measures | |
| Inhalation: | Remove person to fresh air and support breathing as needed. Seek medical attention if irritation persists. |
| Ingestion: | 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 |
| <p>Extinguishing Media: water, dry chemical, or carbon dioxide</p> <p>Special Fire Fighting Procedures: Wear self-contained breathing apparatus and full bunker gear. Smoke and fumes from fire may contain hazardous components.</p> <p>Hazardous Combustion Products: Oxides of nitrogen and sulfur and other toxic gases may be formed in a fire situation, carbon monoxide and other asphyxiates may form as well.</p> <p>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.</p> | | | |
| Section 6 – Accidental Release Measures | | | |
| <p>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.</p> <p>Large Spills: Clean up personnel should protect against mist inhalation and skin contact. Avoid generating mist.</p> <p>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.</p> | | | |
| Section 7 – Precautions for Safe Handling and Use | | | |
| <p>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. Do not store in aluminum or metal vessels. Store out of direct sunlight. DO NOT LET PRODUCT FREEZE.</p> <p>Other Precautions: Consult local, State and Federal regulations pertaining to storage and disposal.</p> | | | |
| Section 8 – Control Measures / Personal Protection | | | |
| <p>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.</p> | | | |
| <p>Ventilation: Local Exhaust: Provide general or local exhaust ventilation systems to maintain airborne concentrations below OSHA PELs. Local exhaust ventilation is preferred.</p> | | | |
| <p>Protective Gloves: Wear rubber or neoprene gloves</p> <p>Eye Protection: Wear protective eyeglasses or chemical safety goggles. Contact lenses are not eye protective devices.</p> <p>Other Protective Clothing or Equipment: Wear chemically protective boots, aprons and gauntlets to prevent prolonged or repeated skin contact.</p> <p>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</p> | | | |
| Section 9 – Physical / Chemical Characteristics | | | |
| Physical State: | Liquid | Specific Gravity (water=1) | 1.38 (11.5 lbs/gal) |
| Freezing Point: | 32 °F | Boiling Point | 212 °F |
| Solubility in Water: | 100% | pH | 10.6 |
| Appearance and Odor Clear, pale yellow liquid: slight sulfur odor | | | |
| Section 10 – Reactivity Data | | | |
| <p>Stability: Product stable at room temperature in closed containers under normal storage and handling conditions.</p> <p>Chemical Incompatibilities: Strong acids and oxidizers. Solutions containing potassium thiosulfate are not compatible with lead or mercury or their alloys.</p> <p>Conditions to avoid: Avoid excessive heat.</p> <p>Hazardous Decomposition Products: Heating this product will evolve sulfur dioxide and sulfur</p> | | | |

dioxide is a respiratory hazard. Heating to dryness will cause the production of potassium sulfate, sulfur and oxides of sulfur.

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 by US DOT regulations

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. **Methylene urea, Ammonia**

Section 16 – Other

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.