1. Product and Company Identification

Product Code:	900314	
Product Name:	17-2-5 LIQUID BULK	
Trade Name:	Liquid Fertilizer	
Company Name:	Turf Care Supply Corp. 50 Pearl Road Suite 200 Brunswick, OH 44212	**Phone Number:** 1 (330)558-0910
Web site address:	www.turfcaresupply.com	
Email address:	regaffairs@tcscusa.com	
Emergency Contact:	PERS	1 (800)633-8253
Information:	Turf Care Supply Corp.	1 (330)558-0910
Synonyms:	Liquid Fertilizer.	

2. Hazards Identification

Acute Toxicity: Oral, Category 4
Acute Toxicity: Skin, Category 5

GHS Signal Word:	**Warning**
GHS Hazard Phrases:	Harmful if swallowed. May be harmful in contact with skin.
GHS Precaution Phrases:	Wash hands thoroughly after handling. Do not eat, drink or smoke when using this product. Do not handle until all safety precautions have been read and understood. Use personal protective equipment as required.
GHS Response Phrases:	IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell. Rinse mouth. IF exposed or concerned: Get medical attention/advice.
GHS Storage and Disposal Phrases:	Store in a diked or contained area to prevent uncontrolled release to the environment.
Potential Health Effects (Acute and Chronic):	Chronic: Prolonged or repeated skin contact may cause dermatitis. Prolonged or repeated exposure may cause permanent eye damage. Chronic exposure may cause lung damage. Adverse reproductive effects have been reported in animals.
Inhalation:	May be harmful if inhaled. Low hazard for normal industrial handling. The toxicological properties of this substance have not been fully investigated. May cause systemic effects. Material may be irritating to mucous membranes and upper respiratory tract.
Skin Contact:	May cause skin irritation. Low hazard for usual industrial handling.
Eye Contact:	May cause eye irritation.
Ingestion:	May be harmful if swallowed. May cause gastrointestinal irritation with nausea, vomiting and diarrhea. Low hazard for normal industrial handling. The toxicological properties of this substance have not been fully investigated. May cause systemic effects.

3. Composition/Information on Ingredients

CAS #	Hazardous Components (Chemical Name)	Concentration
57-13-6	Urea	35.82 %
7447-40-7	Potassium chloride	8.047 %
68333-79-9	Polyphosphoric acids, ammonium salts	3.410 %

4. First Aid Measures

Emergency and First Aid Procedures:

In Case of Inhalation: Remove from exposure and move to fresh air immediately. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical aid.

In Case of Skin Contact: In case of contact, flush skin with plenty of water. Remove contaminated clothing and shoes. Get medical aid if irritation develops and persists. Wash clothing before reuse. Wash off with soap and plenty of water.

In Case of Eye Contact: Flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical aid. Do NOT allow victim to rub eyes or keep eyes closed.

In Case of Ingestion: Get medical aid. If victim is conscious and alert, give 2-4 cupfuls of milk or water. Call a poison control center. If swallowed, do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person.

Signs and Symptoms Of Exposure: To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

Note to Physician: Treat symptomatically and supportively.

5. Fire Fighting Measures

Flash Pt: No data.

Explosive Limits: LEL: No data. UEL: No data.

Autoignition Pt: No data.

Suitable Extinguishing Media: Substance is noncombustible; use agent most appropriate to extinguish surrounding fire. For small fires, use dry chemical, carbon dioxide, or water spray. For large fires, use dry chemical, carbon dioxide, alcohol-resistant foam, or water spray.

Fire Fighting Instructions: As in any fire, wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear. Substance is noncombustible. Decomposes at high temperatures, resulting in toxic and corrosive products. Runoff from fire control or dilution water may cause pollution.

Flammable Properties and Hazards: No data available.

No data available.

6. Accidental Release Measures

Protective Precautions, Protective Equipment and Emergency Procedures: Splash proof safety goggles.

Environmental Precautions: Avoid release to the environment.

Steps To Be Taken In Case Material Is Released Or Spilled: Use proper personal protective equipment as indicated in Section 8.
Spills/Leaks: Avoid runoff into storm sewers and ditches which lead to waterways. Do not let this product enter the environment except as directed on product label. Clean up spills immediately, observing precautions in the Protective Equipment section.

Personal precautions.
Use personal protective equipment.

PROCEDURES & PERSONAL PRECAUTIONS.
Exercise appropriate caution to avoid contact with skin and eyes, and avoid breathing vapors, fumes, and mist.

Methods for cleaning up.
Ventilate area and wash spill site after material pickup is complete.

7. Handling and Storage

Precautions To Be Taken in Handling: Use with adequate ventilation. Avoid contact with eyes, skin, and clothing. Avoid ingestion and inhalation. Wash thoroughly after handling. Use only in a well-ventilated area. Keep container tightly closed. Wash clothing before reuse.

Precautions To Be Taken in Storing: Keep container closed when not in use.

8. Exposure Controls/Personal Protection

CAS #	Partial Chemical Name	OSHA TWA	ACGIH TWA	Other Limits
57-13-6	Urea	No data.	No data.	No data.
7447-40-7	Potassium chloride	No data.	No data.	No data.
68333-79-9	Polyphosphoric acids, ammonium salts	No data.	No data.	No data.

Respiratory Equipment (Specify Type): A respiratory protection program that meets OSHA's 29 CFR 1910.134 and ANSI Z88.2 requirements or European Standard EN 149 must be followed whenever workplace conditions warrant respirator use. For nuisance exposures use type P95 (US) or type P1 (EU EN 143) particle respirator. For higher level protection use type OV/AG/P99 (US) or type ABEK-P2 (EU EN 143) respirator cartridges.

Eye Protection: Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166.

Protective Gloves: Wear appropriate protective gloves to prevent skin exposure. Wash and dry hands.

Other Protective Clothing: Wear appropriate protective clothing to prevent skin exposure.

Engineering Controls (Ventilation etc.): Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower.

Work/Hygienic/Maintenance Practices: Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday. Wash thoroughly after handling.

9. Physical and Chemical Properties

Physical States:	[ ] Gas [X] Liquid [ ] Solid
Appearance and Odor:	Clear. colored. Ammoniacal odor.
pH:	6.0 - 7.0
Melting Point:	No data.
Boiling Point:	No data.
Flash Pt:	No data.
Evaporation Rate:	No data.
Flammability (solid, gas):	No data available.
Explosive Limits:	LEL: No data. UEL: No data.
Vapor Pressure (vs. Air or mm Hg):	No data.
Vapor Density (vs. Air = 1):	No data.
Specific Gravity (Water = 1):	1.1 - 1.4
Solubility in Water:	No data.
Solubility Notes:	Infinitely miscible with water.
Percent Volatile:	No data.
Autoignition Pt:	No data.

10. Stability and Reactivity

Reactivity:	Stable. However, may decompose if heated.
Stability:	Unstable [ ] Stable [X]
Conditions To Avoid - Instability:	Incompatible materials, dust generation, heating to decomposition. High temperatures.
Incompatibility - Materials To Avoid:	Strong oxidizing agents, bases, acids, aluminum.
Hazardous Decomposition or Byproducts:	Carbon monoxide, oxides of nitrogen, Carbon dioxide, oxides of sulfur, nitrogen oxides (NOx) and ammonia (NH3). Nitrogen oxides, oxides of phosphorus, Ammonia, Oxides of potassium, Hydrogen chloride, chlorine, irritating and toxic fumes and gases.
Possibility of Hazardous Reactions:	Will occur [ ] Will not occur [X]
Conditions To Avoid - Hazardous Reactions:	No data available.

11. Toxicological Information

Toxicological Information:

Epidemiology: No information found.
Teratogenicity: No information available.
Tumorigenic effects have been reported in experimental animals.
Teratogenicity: Teratogenic effects have occurred in experimental animals.
Adverse reproductive effects have occurred in experimental animals.
Neurotoxic effects have occurred in experimental animals.
Reproductive toxicity - no data available.
Inhalation: May cause damage to organs through prolonged or repeated exposure.

CAS# 57-13-6: Urea:
Other Studies:, TCLo, Inhalation, Rat, 288.0 MG/M3, 17 W; Gigiena Truda i Professional'nye Zabolevaniya.(Labor Hygiene and Occupational Disease), V/O Mezhdunarodnaya Kniga, Moscow 113095 Russia, Vol/p/yr: 30(3),43, 1986

Acute toxicity, LD50, Oral, Rat, 8471. MG/KG; Gigiena i Sanitariya, Mezhdunarodnaya Kniga, ul. B. Yakimanka, 39, 113095, Moscow 113095 Russia, Vol/p/yr: 51(6),8, 1986

Standard Draize Test, Skin, Human, 22.00 MG, 3 D; Cutaneous Toxicity, Proceedings of the 3rd Conference, 1976, D, V.A., and P. L, New York, Academic Press, Inc., London United Kingdom, Vol/p/yr: -,127, 1977

CAS# 7447-40-7: Potassium chloride:
Acute toxicity, LD50, Oral, Rat, 2600. MG/KG; "Sbornik Vysledku Toxixologickeho Vysetreni Latek A Pripravku," , Institut Pro Vychovu Vedoucicn P, Marhold, J.V., Institut Pro Vychovu Vedoucicn, Pracovniku Chemickeho, Prumyclu Praha Czechoslovakia, Vol/p/yr: -,8, 1972

Standard Draize Test, Eyes, Species: Rabbit, 500.0 MG, 24 H; "Sbornik Vysledku Toxixologickeho Vysetreni Latek A Pripravku," , Institut Pro Vychovu Vedoucicn P, Marhold, J.V., Institut Pro Vychovu Vedoucicn, Pracovniku Chemickeho, Prumyclu Praha Czechoslovakia, Vol/p/yr: -,8, 1972

Carcinogenicity/Other Information:

Carcinogenicity

CAS #	Hazardous Components (Chemical Name)	NTP	IARC	ACGIH	OSHA
57-13-6	Urea	n.a.	n.a.	n.a.	n.a.
7447-40-7	Potassium chloride	n.a.	n.a.	n.a.	n.a.
68333-79-9	Polyphosphoric acids, ammonium salts	n.a.	n.a.	n.a.	n.a.

12. Ecological Information

General Ecological Information:

Environmental: If released to the atmosphere, urea will degrade rapidly in the vapor-phase by reaction with photochemically produced hydroxyl radicals (half-life of 9.6 hr). If released to soil, urea is hydrolyzed to ammonium through soil urease activity (the basis of its use as a fertilizer). The rate of hydrolysis can be fast (24 hr); however, a number a variables (such as increasing the pellet size of the fertilizer) can decrease the degradation rate from days to weeks.

Other: Do not empty into drains.

Other: Estimated BCF value = 0.05. This value indicates that this product will exhibit low bioconcentration in aquatic organisms. Biodegradation is expected to be an important fate process in water. It has a low potential to affect aquatic systems. If diluted with water, this chemical released directly or indirectly into the environment is not expected to have a significant impact.

CAS# 57-13-6: Urea:
Lethal concentration to 0% of test organisms., Creek Chub (Semotilus atromaculatus), 16000000. UG/L, 24 H, Mortality, Water temperature: 15.00 C - 21.00 C C, pH: 8.30, Hardness: 98.00 MG/L; Appraisal of a Chemical Waste Problem by Fish Toxicity Tests, Gillette, L.A., D.L. Miller, and H.E. Redman, 1952

CAS# 7447-40-7: Potassium chloride:
LC50, Brine Shrimp (Artemia salina), 70600. UMOL/L, 24 H, Mortality; Comparative Acute Toxicity of the First 50 Multicentre Evaluation of In Vitro Cytotoxicity Chemicals to Aquatic Non-vertebrates, Calleja, M.C., G. Persoone, and P. Geladi, 1994

LC50, Crayfish (Austropotamobius pallipes ssp. pall), 390000. UG/L, 96 H, Mortality, Water temperature: 15.00 C - 17.00 C C, pH: 7.00; Specific Toxic Properties of Metallic Salts in Austro-potamobius pallipes pallipes and Orconectes limosus (Proprietes Toxiques Specifiques des sels Metalliques chez Austropotamobius pallipes pallipes et Orconectes limosu, Boutet, C., and C. Chaisemartin, 1973

CAS# 68333-79-9: Polyphosphoric acids, ammonium salts:
LC50, Fathead Minnow (Pimephales promelas), egg(s), 2317000. UG/L, 96 H, Mortality, Water temperature: 20.00 C C, pH: 7.50, Hardness: 42.00 MG/L; Acute Toxicity of Firefighting Chemical Formulations to Four Life Stages of Fathead Minnow, Gaikowski, M.P., S.J. Hamilton, K.J. Buhl, S.F. McDonald, and C.H. Summers, 1996

Persistence and Degradability: No data available.

Bioaccumulative Potential: No data available.

Mobility in Soil: No data available.

13. Disposal Considerations

Waste Disposal Method: Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. US EPA guidelines for the classification determination are listed in 40 CFR Parts 261. Additionally, waste generators must consult state and local hazardous waste regulations to ensure complete and accurate classification.
RCRA P-Series: None listed.
RCRA U-Series: None listed.

Observe all federal, state, and local environmental regulations. Contact a licensed professional waste disposal service to dispose of this material.

14. Transport Information

LAND TRANSPORT (US DOT):

DOT Proper Shipping Name: Not Regulated.
DOT Hazard Class:
UN/NA Number:

LAND TRANSPORT (Canadian TDG):

TDG Shipping Name: Not Regulated.

15. Regulatory Information

EPA SARA (Superfund Amendments and Reauthorization Act of 1986) Lists

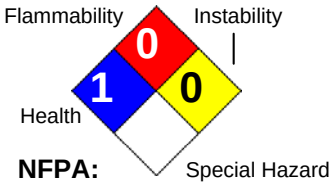
CAS #	Hazardous Components (Chemical Name)	S. 302 (EHS)	S. 304 RQ	S. 313 (TRI)
57-13-6	Urea	No	No	No
7447-40-7	Potassium chloride	No	No	No
68333-79-9	Polyphosphoric acids, ammonium salts	No	No	No

This material meets the EPA	[X] Yes [ ] No	Acute (immediate) Health Hazard
'Hazard Categories' defined	[X] Yes [ ] No	Chronic (delayed) Health Hazard
for SARA Title III Sections	[ ] Yes [X] No	Fire Hazard
311/312 as indicated:	[ ] Yes [X] No	Sudden Release of Pressure Hazard
	[ ] Yes [X] No	Reactive Hazard

16. Other Information

Revision Date: 06/20/2013

Hazard Rating System:



Additional Information About This Product: No data available.

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