



MATERIAL SAFETY DATA SHEET

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SECTION 1 – PRODUCT IDENTIFICATION AND USE

PRODUCT IDENTIFIER:	TURF 18-3-4		
PRODUCT USE:	Liquid Fertilizer	SUPPLIER'S NAME:	Same as manufacturer
MANUFACTURER'S NAME:	Agrisol Manufacturing Inc.	ADDRESS:	Same as manufacturer
ADDRESS:	220 – 7565, 132 Street, Surrey, BC, V3Z 1K7 Canada		

Emergency Phone No: 1(866) 246-3378

SECTION 2 – HAZARDOUS INGREDIENTS

HAZARDOUS INGREDIENTS	CAS #	LD ₅₀ OF INGREDIENT (SPECIFY SPECIES & ROUTE)
Potassium Nitrate	7757-79-1	LD ₅₀ (rat, oral) 3750 mg/kg
Phosphoric Acid	7664-38-2	LD ₅₀ (oral male rat) 1530 mg/Kg LD ₅₀ (dermal rabbit) 2730 mg/Kg Inhalation LC ₅₀ (rat) 850 mg/m ³
Urea	57-13-6	LD ₅₀ (oral, rat): 14300-15000 mg/kg LD ₅₀ (oral, mouse): 11500-13000 mg/kg LC ₅₀ (fish, 96hrs):>9100 mg/L LC ₅₀ (daphnia, 24 hrs) 10000 mg/L
Ferrous Sulphate	7720-78-7	LD ₅₀ (oral rat) 319 mg/Kg
Manganese Sulphate	10034-96-5	Oral rat LD50: 2150 mg/Kg.
Zinc (Zn) Sulphate	7446-20-0	Acute Dermal LD50 Rat: > 2000 mg/kg Acute Oral LD50 Rat: 623 mg/kg
Iron (Fe) EDTA	15708-41-5	LD ₅₀ (rat, oral) >5000 mg/kg
Borax	10043-35-3	LD ₅₀ (rat, oral) 2660 mg/kg

SECTION 3 – PHYSICAL DATA

PHYSICAL STATE:	Liquid	ODOUR & APPEARANCE	Greenish liquid; Slight odor
ODOUR THRESHOLD (ppm):	NAV	VAPOUR PRESSURE (mmHg):	Negligible
VAPOUR DENSITY(air=1):	NAP	SPECIFIC GRAVITY:	1.17 g/ml
pH:	5.0 – 6.0	BOILING POINT (°C)	100
FREEZING POINT (°C)	0 °C	EVAPORATION RATE:	NAP
COEFF. WATER/OIL DIST	NAV	SOLUBILITY (in water):	Soluble in water

SECTION 4 – FIRE AND EXPLOSION DATA

FLAMMABLE:	No
IF YES, UNDER WHAT CONDITIONS?	Even though product is not combustible, it can contribute to combustion as a source of fuel.
MEANS OF EXTINCTION:	Water spray or fog, foam, Carbon dioxide or halon
SPECIAL PROCEDURES:	If possible remove containers from fire area without risk. Spray water from as far a distance as possible.

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FLASHPOINT (°C) & METHOD:	NAV	AUTO IGNITION TEMPERATURE (°C)	NAP
LOWER FLAMMABLE LIMIT (% by volume):	NAP	UPPER FLAMMABLE LIMIT (% by volume):	NAP
SENSITIVITY TO IMPACT:	Some evidence	SENSITIVITY TO STATIC DISCHARGE:	No evidence
HAZARDOUS COMBUSTION PRODUCTS:			

SECTION 5 – REACTIVITY DATA

CHEMICAL STABILITY:	Stable under normal conditions		
INCOMPATIBILITY:	Strong Alkalis	CORROSIVE BEHAVIOUR:	Corrosive
REACTIVITY AND UNDER WHAT CONDITIONS:	Keep away from ignition sources, shock, water/moisture, heat and incompatible materials.		
HAZARDOUS DECOMPOSITION PRODUCTS:	See hazardous combustion products (Section 4).		

SECTION 6 – TOXICOLOGICAL PROPERTIES

ROUTES OF ENTRY:							
SKIN CONTACT:	Yes	SKIN ABSORPTION:	Yes	EYE CONTACT:	Yes	INHALATION:	No
EFFECTS OF ACUTE EXPOSURE TO PRODUCT:							
INGESTION:	Ingestion of large amounts may cause gastrointestinal irritation characterized by abdominal cramps, nausea, vomiting and bloody diarrhea. Ingestion may also cause headaches, labored breathing, confusion, dizziness, convulsions and collapse. Other symptoms may include blue lips or fingernails and blue skin. The product may also cause effects on the blood resulting in the formation of methaemoglobin.						
INHALATION:	NAP						
EYE CONTACT:	May cause eye irritation						
SKIN CONTACT:	May cause skin irritation						

EFFECTS OF CHRONIC EXPOSURE:

Chronic exposure may cause kidney damage, and central nervous system depression (headache and mental impairment). Chronic dermatitis or an allergic skin sensitization may also develop from repeated exposure. Other symptoms include anemia and the formation of methaemoglobin. Inorganic phosphorus compounds may cause irritation and hemorrhages in the stomach as well as liver damage. Bone structure may be attacked, especially the jaw and teeth.

EXPOSURE STANDARDS:

MUTAGENICITY:	NAV		
REPRODUCTIVE HAZARD:	NAV	TERATOGENICITY:	NAV
IRRITANCY:	Yes	SENSITIZATION:	Yes
SYNERGISTIC PRODUCTS:	NAV		

SECTION 7 – PREVENTIVE MEASURES

PERSONAL PROTECTIVE EQUIPMENT:	Hands wear: Water resistant rubber type gloves (latex, nitrile, PVC). Respirator: Wear- NIOSH approved filter cartridge to remove avoid inhalation of vapours. Eye: Wear safety goggles. Footwear: Wear work boot/rubber boots. Clothing: Long sleeve and pants - no special clothing required.
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ENGINEERING CONTROLS:	General mechanical ventilation is adequate, minimize vapour generation.
HANDLING PROCEDURES:	Do not handle unless safety precaution have been read and understood, avoid eye and skin contact. Avoid inhalation of vapours. Do not puncture, drag or slide container.
STORAGE REQUIREMENTS:	Store in cool, dry area and well ventilated area. Keep container closed.
LEAK AND SPILL PROCEDURE:	Wear necessary personal protective equipment during clean-up, vacuum, avoid creating splash. Place in properly labeled containers for later disposal.
WASTE DISPOSAL:	Disposal in accordance with Federal, Provincial & Municipal waste regulations.

SECTION 8 – FIRST AID MEASURES

INHALATION:	Move victim to fresh air. Give artificial respiration ONLY if breathing has stopped, assist breathing with oxygen. Obtain medical assistance immediately.
SKIN CONTACT:	Remove contaminated clothing. Wash affected area with water for a minimum of 15 minutes. Obtain medical attention if irritation or redness persists.
EYE CONTACT:	Flush eyes thoroughly while holding both upper and lower eye lids for a minimum of 15 minutes. Obtain medical attention.
INGESTION:	Do not attempt to give anything by mouth to unconscious victim. If victim is alert and not convulsing, rinse mouth and give water to dilute material. Do not induce vomiting. If vomiting occurs, have victim lean forward with head down to avoid breathing in vomit, rinse mouth. Obtain medical attention immediately.

SECTION 9 – DEPARTMENT OF TRANSPORTATION

SHIPPING INFORMATION
US and Canada: Not regulated
International Shipping: Not regulated
TDG: Not regulated.
IATA: Not regulated

SECTION 10 – PREPARATION DATE OF MSDS

PREPARED BY: Agrisol Manufacturing Inc. 220 – 7565, 132 Street, Surrey, BC, V3Z 1K7 Canada	ADDITIONAL INFORMATION: At the time of preparation, the information and data contained in this MSDS are believed to be accurate and have been compiled from sources that are believed to be reliable.
BUSINESS NUMBER: 604-805-2417	DATE: November, 2015