

MATERIAL SAFETY DATA SHEET

This Material Safety Data Sheet meets or exceeds the requirements of the 29 CFR 1910.1200 (OSHA)

1. Product and Supplier Identification

Product: Transport

Product Use: Plant Foliar Spray

Manufacturer: **Tulsi Enterprises Ltd.**
10328 Hall Avenue,
Richmond, BC Canada V6X 3T9
Emergency Telephone: (604) 218-8567

Supplier: As above

2. Composition

Component	% (w/w)	Exposure Limits (ACGIH)*	LD ₅₀	LC ₅₀
All ingredients do not meet requirements for disclosure	100	Not applicable	Not applicable	Not applicable

* ACGIH – American Conference of Governmental Industrial Hygienists

Exposure limits may vary from time to time and from one jurisdiction to another. Check with local regulatory agency for the exposure limits in your area.

3. Hazards Identification

Routes of Entry:

Skin Contact: Yes Eye Contact: Yes Ingestion: Yes Inhalation: No

Acute Health Effects: This product is alkaline. Based on animal information, contact with skin may produce moderate irritation. This product is a moderate to severe eye irritant. This product is not considered toxic by ingestion. Ingestion of large amounts may produce gastro intestinal upset resulting in diarrhea. Not considered to be an inhalation hazard unless the product is heated or misted. Inhalation of vapours or mists will cause moderate to severe irritation of the nose, throat and upper respiratory tract. Symptoms may include coughing, wheezing, shortness of breath, difficulty breathing, headache, nausea, vomiting, and chest pain.

Chronic Health Effects: For persons who have sensitive skin, or who are pre-disposed to skin problems, prolonged contact may result in dry, red, irritated skin. This product is not a respiratory

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or skin sensitizer. Ingredients in the product are absorbed through the skin. Repeated exposures may cause abnormal liver and/or kidney function resulting in anemia.

4. First Aid Measures

EYE CONTACT: Flush contaminated eye(s) with lukewarm, gently running water for 15 minutes, holding eyelids open. If contacts are present, irrigate eyes immediately and do not attempt to remove the contact. Take care not to cross contaminate eyes. Continue to irrigate eye(s) while transporting to a medical facility. Seek medical attention case of all contact with eyes.

SKIN CONTACT: Wash affected area immediately with mild soap and water and continue for 15 minutes. If irritation persists, seek immediate medical attention. Remove any contaminated clothing and launder clothing before reuse.

INHALATION: This is an unlikely route of entry, but if victim has been exposed to mist or vapours, remove to fresh air. If breathing has stopped, a trained person should perform artificial respiration. Get medical attention immediately.

INGESTION: Do not induce vomiting. Give 60 - 240 ml of water to dilute material. If vomiting occurs naturally, have victim lean forward with head between knees to reduce risk of aspiration. Rinse mouth with water. Seek medical attention.

5. Fire Fighting Measures

Flash point:	Not applicable
Autoignition temperature:	Not applicable. See information under "Fire Fighting Instructions"
Lower Explosive Limit:	Not applicable
Upper Explosion Limit:	Not applicable
Sensitivity to Impact:	Not sensitive.
Sensitivity to Static Discharge:	Not sensitive.

Hazardous Combustion Products: Upon evaporation to dryness, proprietary ingredient starts to decompose at 200°C and undergoes self-sustaining exothermic decomposition at 250°C. Nitrogen oxides, ammonia, hydrogen cyanide, nitriles, isocyanates, nitrosamines, formaldehyde, carbon monoxide, carbon dioxide and other unidentified hydrocarbons in smoke may occur.

Extinguishing Media: This product is not combustible. Use any means to extinguish surrounding fire. Water spray may be used to cool surrounding containers.

Fire Fighting Instructions: Evacuate area. Fight fire from a protected location or maximum distance possible. Approach fire from upwind and avoid hazardous vapours and toxic decomposition products. Wear full protective gear if exposure is possible. Use approved positive pressure self-contained breathing apparatus.

6. Accidental Release Measures

Personal Protection: See Section 8 for proper protective equipment to be worn while cleaning an accidental spill.

Environmental Precautions: Prevent from entering waterways or sewers.

Cleanup Procedures: Do not touch spilled material. Prevent material from entering confined spaces and stop leak if safe to do so. Contain liquid with earth, sand, or absorbent material which

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does not react with the spilled material. Place absorbing medium into approved containers for disposal. Flush area with water.

7. Handling and Storage

Handling Procedures: Keep container tightly closed when not in use. Avoid methods of use that will cause misting of product. Launder clothing before reuse. Wash face and hands thoroughly after handling and before eating, drinking, or using tobacco products. Keep from freezing.

Storage: Store in cool, dry place and in an upright position to prevent leakage.

8. Exposure Controls, Personal Protection

Engineering Controls: Under manufacturers recommended use, no particular controls necessary.

Respiratory Protection: Not necessary if used as recommended.

Skin Protection: If predisposed to skin problems, it is recommended that any chemically impervious gloves and/or clothing be used. Barrier cream may be used if contact is sporadic.

Eye and Face Protection: Using chemical splash-proof goggles is recommended.

Footwear: As required by worksite rules.

Other: Eye wash station should be located near work area.

9. Physical and Chemical Properties

Appearance:	Liquid	Freezing Point	Not determined
Odour:	None	Boiling Point:	≈100 °C
Odour Threshold:	Not applicable	Critical Temperature:	Not determined
pH:	11.0	Relative Density:	Not determined (water = 1)
Vapour Pressure:	As for water	Partition Coefficient:	Not determined
Solubility:	Soluble in water in all concentrations.	Evaporation Rate:	Not determined
Vapour Density:	Not determined (air = 1)		

10. Stability and Reactivity

Chemical Stability and Reactivity: Product is stable.

Incompatibility: Avoid contact with strong oxidizers, strong mineral acids such as sulphuric acid, nitrating agents, halogenating agents, alkali metals or aluminum.

Hazardous Decomposition Products: Nitrogen oxides, ammonia, hydrogen cyanide, nitriles, isocyanates, nitrosamines, formaldehyde, carbon monoxide, carbon dioxide and other unidentified hydrocarbons in smoke may occur.

Hazardous Polymerization: Hazardous polymerization will not occur.

11. Toxicological Information

Acute Exposure Theoretical oral LD₅₀ for the product is greater than 25 g/kg (oral/rat). The LD₅₀ (dermal) has not been determined.

Chronic Exposure:	See Section 3.
Exposure Limits:	See Section 2.
Irritancy:	See Section 3.
Sensitization:	See Section 3.
Carcinogenicity:	There is inadequate information to conclude that the proprietary ingredient is a carcinogen (IARC)
Teratogenicity:	Available information does not indicate that this product is a teratogen.
Reproductive toxicity:	Available information does not indicate that this product is a reproductive toxin.
Mutagenicity:	Available information does not indicate that this product is a mutagen.
Synergistic products:	The proprietary ingredient is found to produce a nasal cavity and liver carcinogen if ingested with sodium nitrate. Consumption of ethanol may enhance or confound choline deficiency.

12. Ecological Information

Environmental toxicity:

Proprietary ingredient

TERRESTRIAL FATE: If released to soil, proprietary ingredient is expected to biodegrade fairly rapidly following acclimation (half-life on the order of days to weeks). The proprietary ingredient is expected to leach in soil. However, protonated proprietary ingredient may adsorb to humic material in suspended solids and sediments. Volatilization from soil surfaces is not expected to be an important fate process.

AQUATIC FATE: If released to water, proprietary ingredient should biodegrade. The half-life of this compound is expected to range from a couple of days to a few weeks depending, in large part, on the degree of acclimation of the system. N-Nitrosoproprietary ingredient is a metabolite of the proprietary ingredient. Protonated The proprietary ingredient may adsorb to humic material in suspended solids and sediments. Bioconcentration in aquatic organisms and volatilization are not expected to be important fate processes in water.

ATMOSPHERIC FATE: Based on a vapor pressure of 1.4×10^{-4} mm Hg at 25 deg C, the proprietary ingredient is expected to exist almost entirely in the vapor phase in the atmosphere. Reaction with photochemically generated hydroxyl radicals is expected to be the dominant removal mechanism (half-life 4 hours). The complete solubility of the proprietary ingredient in water suggests that this compound may also be removed from the atmosphere in precipitation.

Biodegradability: No data available.

Bioaccumulation: A bioconcentration factor (BCF) of <1 was estimated for the proprietary ingredient based on a log Kow of - 1.43. This BCF value and complete solubility of the proprietary ingredient in water suggest that this compound does not bioconcentrate significantly in aquatic organisms.

13. Disposal Considerations

Canadian Environmental Protection Act: All ingredients are listed on the DSL. Dispose according to all local, provincial and federal requirements.

14. Transport Information

Canadian Transportation of Dangerous Goods Regulations: Not regulated.

International Air Transport Association (IATA): Not regulated.

International Maritime Organization (IMO): Not regulated.

15. Regulatory Information

Canadian Federal Regulations:

Canadian Environmental Protection Act: All ingredients are on the Domestic Substances List.

WHMIS Classification: D2B

UNITED STATES – FEDERAL REGULATIONS:

TOXIC SUBSTANCES CONTROL ACT (TSCA): All components are listed in the inventory.

OSHA, 29 CFR 1910, Subpart Z: Meets the criteria for a hazardous substance.

CERCLA, 40 CFR 302: Proprietary ingredient has an RQ = 45.4 Kg.

SARA 302, 40 CFR 355: No ingredients are listed.

SARA 313, 40 CFR 372: Proprietary ingredient is subject to the reporting requirements.

SARA 311/312, 40 CFR 370: Immediate (Acute) Health, Delayed (Chronic) Health.

PROPOSITION 65, California Safe Drinking Water and Toxicity Enforcement Act of 1986: No ingredients appear on the list of Carcinogens or Reproductive Toxins as published on the effective date of this Material Safety Data Sheet.

16. Other Information

Preparation Date: January 22, 2010

Prepared by: Tulsi Enterprises Ltd.

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This Material Safety Data Sheet may not be changed, or altered in any way without the expressed knowledge and permission of Tulsi Enterprises Ltd.

Revisions: None