

SAFETY DATA SHEET



25-5-10 65% SRN

Section 1 – Product and Company Identification

Product Identifier: 25-5-10 65% SRN
Product Use: Fertilizer
Manufacturer/Supplier: Eco Solutions
1114 Lower Base line East
Milton, Ontario L9E 0S9
Office: 905 864-8740
Fax: 5905 693-8959
Emergency Telephone Number: Canutec: 613n 996n 6666
Chemtrec: 800n 424n 9300

Section 2 – Hazards Identification

Hazard Classification:

Category 3 - Specific Target Organ Toxicity – Single Exposure
Category 2 - Skin Irritant
Category 2A - Eye Irritant
Category 5 - Oral Toxicity



Signal Word: WARNING

Hazard Statements:

May be harmful if swallowed.
Causes skin irritation.
Causes serious eye irritation.
May cause respiratory irritation.

Precautionary Statements (Prevention):

Do not breathe dust.
Wash hands thoroughly after handling.
Do not eat, drink or smoke when using this product.
Use only outdoors or in a well-ventilated area.
Wear protective gloves/eye protection/face protection.

Precautionary Statements (Response):

Skin Contact: If skin irritation occurs: Get medical advice/attention.
Eye Contact: Rinse continuously with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.

Precautionary Statements (Storage):

Store in a dry well ventilated place. Keep container tightly closed. Keep cool. Protect from sunlight.

Precautionary Statements (Disposal):

Dispose of contents/container according to local, regional, national and/or international regulations.

Hazards Not Otherwise Classified:

Not applicable.

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| Section 3 – Composition/Information on Ingredients |
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| Ingredients | CAS # |
|-------------------------------------|-------------|
| ProGuard | |
| Urea | 57-13-6 |
| Dicyandiamide | 461-58-5 |
| N-(n-butyl)-thiophosphoric triamide | 94317-64-3 |
| N-Methyl-2-pyrrolidone | 872-50-4 |
| Non hazardous component | Proprietary |
| Non hazardous dye | Proprietary |
| Dolomite Limestone | 1317-65-3 |
| Muriate of Potash | 7447-40-7 |
| Urea | 57-13-6 |
| Monoammonium Phosphate | 7722-76-1 |

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| Section 4 – First Aid Measures |
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First-Aid Measures By Route Of Exposure:

Inhalation: Move person to fresh air; if effects occur, consult a physician.

Skin Contact: Wash skin with soap and water. Seek medical attention if irritation persists.

Eye Contact: Do not rub eyes. Immediately flush eyes with water; remove contact lenses if present, then continue flushing eyes for at least 15 minutes. Seek medical attention if irritation develops and persists.

Ingestion: If swallowed, seek medical attention. Rinse mouth thoroughly. Do not induce vomiting unless directed to do so by medical personnel. Do not give anything by mouth to an unconscious or convulsive person.

Most Important Symptoms And Effects (Acute Or Delayed):

Inhalation: Respiratory tract irritation.

Skin Contact: Skin irritation.

Eye Contact: Serious eye irritation.

Ingestion: Harmful if large quantities have been ingested.

Immediate Medical Attention And Special Treatment, If Necessary: Symptoms may be delayed. Treat symptomatically.

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| Section 5 – Fire Fighting Measures |
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Suitable Extinguishing Media: Use fire extinguishing media appropriate for surrounding materials.

Unsuitable Extinguishing Media: None known.

Specific Hazards Arising From The Hazardous Product: None known.

Special Protective Equipment And Precautions For Fire Fighters: Wear self-contained breathing apparatus and full protective clothing. Toxic gases may be released at elevated temperatures.

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| Section 6 – Accidental Release Measures |
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Personal Precautions, Protective Equipment And Emergency Procedures: Do not touch damaged containers or spilled material unless wearing appropriate protective gear. Avoid inhalation of dust and contact with skin and eyes. Ensure adequate ventilation.

Methods And Materials For Containment And Cleaning Up: Product must be disposed of according to local, regional, national and/or international regulations. Shovel spilled material into containers, trying to generate as little dust as possible. Prevent product from entering sewers/waterways.

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| Section 7 – Handling and Storage |
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Precautions For Safe Handling: Wear appropriate protective equipment. Avoid generating dust. Avoid inhalation of dust and contact with eyes. Wash hands thoroughly after handling the product and before eating, drinking and/or smoking.

Conditions For Safe Storage: Store in tightly closed container in a dry well-ventilated area. Protect from sunlight and keep product cool. Keep away from food, drink and animal feed. Keep out of reach of children. Store away from incompatible materials.

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| Section 8 – Exposure Controls/Personal Protection |
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Control Parameters:**U.S. ACGIH Threshold Limit Values**

| Components | Type | Value | Form |
|------------|------|----------------------|----------------------|
| Dust | TWA | 3 mg/m ³ | Respirable particles |
| | | 10 mg/m ³ | Inhalable particles |

Canada, Alberta OELs (Occupational Health & Safety Code, Schedule 1, Table 2)

| Components | Type | Value | Form |
|------------|------|----------------------|----------------------|
| Dust | TWA | 3 mg/m ³ | Respirable particles |
| | | 10 mg/m ³ | Total particulate |

Canada, British Columbia OELs (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended)

| Components | Type | Value | Form |
|------------|------|----------------------|---------------------|
| Dust | TWA | 3 mg/m ³ | Respirable fraction |
| | | 10 mg/m ³ | Total dust |

Canada, Manitoba OELs (Reg. 217/2006, The Workplace Safety And Health Act)

| Components | Type | Value | Form |
|------------|------|---------------------|----------------------|
| Dust | TWA | 3 mg/m ³ | Respirable particles |

Canada, Ontario OELs (Control of Exposure to Biological or Chemical Agents)

| Components | Type | Value | Form |
|--|------|-----------------------|---------------------|
| Dust | TWA | 3 mg/m ³ | Respirable fraction |
| | | 10 mg/m ³ | Inhalable fraction |
| N-Methyl-2-pyrrolidone (CAS 872 50-4) | TWA | 400 mg/m ³ | |

Canada, Quebec OELs (Ministry of Labour - Regulation respecting occupational health and safety)

| Components | Type | Value | Form |
|------------|------|----------------------|------------|
| Dust | TWA | 10 mg/m ³ | Total dust |

Biological Limit Values:**ACGIH Biological Exposure Indices**

| Components | Value | Determinant | Specimen | Sampling Time |
|--|----------|----------------------------------|----------|---|
| N-Methyl-2-pyrrolidone (CAS 872 50-4) | 100 mg/l | 5-Hydroxy-N-methyl-2-pyrrolidone | Urine | For details, please see the source document |

Appropriate Engineering Controls: Use adequate general or local exhaust ventilation to keep airborne concentrations below exposure limits. If necessary, wear a NIOSH approved respirator.

Individual Protection Measures:

Respiratory Protection: Use a NIOSH approved respiratory mask, when necessary.

Protective Gloves: Use protective gloves (PVC, neoprene or rubber).

Eye Protection: Use close fitting safety goggles.

General Industrial Hygiene Practices: Handle in accordance with good industrial hygiene and safety practices. Wash hands thoroughly with soap and water after handling and before eating or drinking.

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| Section 9 – Physical and Chemical Properties |
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| Appearance: | Multi-coloured granules. |
| Odour: | Slight odour. |
| Odour Threshold: | Not available. |
| pH: | Not available. |
| Melting Point/Freezing Point: | Not available. |
| Initial Boiling Point/Boiling Range: | Not available. |
| Flash Point: | Not available. |
| Evaporation Rate: | Not available. |
| Flammability (Solid; Gas): | Not readily ignited. |
| Lower Flammable/Explosive Limit: | Not applicable. |
| Upper Flammable/Explosive Limit: | Not applicable. |
| Vapour Pressure: | Not available. |
| Vapour Density: | Not available. |
| Relative Density: | Not available. |
| Solubility: | Partially soluble. |
| Partition Coefficient – N-Octanol/Water: | Not available. |
| Auto-Ignition Temperature: | Not available. |
| Decomposition Temperature: | Not available. |
| Viscosity: | Not available. |

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| Section 10 – Stability and Reactivity |
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Reactivity: Not reactive under normal storage and handling conditions.

Chemical Stability: Stable under recommended handling and storage conditions.

Possibility Of Hazardous Reactions: Hazardous polymerization does not occur.

Conditions To Avoid: Extreme temperatures. Contact with incompatible materials.

Incompatible Materials: Hypochlorites, acids, alkalis, nitrites, nitrates, oxidizing or reducing agents.

Hazardous Decomposition Products: Ammonia, hydrogen sulfide, carbon oxides, nitrogen oxides, sulfur oxides.

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| Section 11 – Toxicological Information |
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Information On The Likely Routes Of Exposure:

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| Inhalation: | Dust may irritate the respiratory system. |
| Skin Contact: | Dust may irritate the skin. |
| Eye Contact: | Dust may irritate the eyes and due to abrasiveness may cause eye damage. |
| Ingestion: | May irritate and cause stomach pain, vomiting and diarrhea. |

Symptoms Related To The Physical, Chemical And Toxicological Characteristics:

Inhalation: Dust may irritate throat and respiratory system.

Skin Contact: May cause mild skin irritation.

Eye Contact: Dust may cause mild irritation and due to abrasiveness may cause eye damage.

Ingestion: May cause stomach pain, vomiting and diarrhea.

Information On Toxicological Effects:

Acute Toxicity: May irritate and cause stomach pain, vomiting and diarrhea.

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Toxicological Data

| Components | Test Results |
|--|---|
| Dicyandiamide (CAS 461-58-5) | Acute Dermal LD ₅₀ Rabbit: >2000 mg/kg, 24 hours Acute Inhalation LC ₅₀ Rat: >259 mg/m ³ , 4 hours Acute Oral LD ₅₀ Rat: >10000 mg/kg |
| N-(N-butyl)-thiophosphoric triamide (CAS 94317-64-3) | Acute Dermal LD ₅₀ Rabbit: >2000 mg/kg Acute Inhalation LC ₅₀ Rat: >2.1 mg/l, 4 hours Acute Oral LD ₅₀ Rat: >2000 mg/kg |
| N-Methyl-2-pyrrolidone (CAS 872-50-4) | Acute Dermal LD ₅₀ Rat: >5000 mg/kg Acute Inhalation LC ₅₀ Rat: >5.1 mg/l, 4 hours Acute Oral LD ₅₀ Rat: 3605 mg/kg |
| Urea (CAS 57-13-6) | Acute Oral LD ₅₀ Rat: 14300 mg/kg |

Skin Corrosion/Irritation: May cause irritation through mechanical abrasion.

Irritation Corrosion – Skin

N-Methyl-2-pyrrolidone (CAS 872-50-4) Result: Slightly irritating Species: Rabbit

Serious Eye Damage/Eye Irritation: May cause eye irritation.

Irritation – Eye

N-Methyl-2-pyrrolidone (CAS 872-50-4) Result: Moderately irritating Species: Rabbit
Observation Period: 14 days

Respiratory Or Skin Sensitization:

Respiratory Sensitization: No data available. **Skin Sensitization:** Not a skin sensitizer.

Germ Cell Mutagenicity: No data available

Carcinogenicity: Not classified as a carcinogen.

Reproductive Toxicity: Product contains a small amount of substance that is suspected of damaging fertility or the unborn child.

Specific Target Organ Toxicity – Single Exposure: No data available.

Specific Target Organ Toxicity – Repeated Exposure: No data available.

Aspiration Hazard: Not classified.

Chronic Effect: Prolonged exposure may cause chronic effects.

Further Information: No other specific acute or chronic health impact noted.

Section 12 – Ecological Information

Ecotoxicological Data

| Components | Test Results |
|-------------------------------------|--|
| Dicyandiamide | Acute EC ₅₀ Selenastrum capricornutum: 2.04 g/l, 4 days Acute EC ₅₀ Daphnia magna: >3177 mg/l, 48 hours Acute LC ₅₀ Lepomis macrochirus: >1000 mg/l, 96 hours Acute LC ₅₀ Oncorhynchus mykiss: 7700 ppm, 96 hours Chronic LC ₅₀ Daphnia magna: >100 mg/l, 21 days Chronic LC ₅₀ Oryzias latipes: >100 mg/l, 14 days |
| N-(N-butyl)-thiophosphoric triamide | EC ₅₀ Selenastrum capricornutum: 280 mg/l, 96 hours EC ₅₀ Daphnia magna: 290 mg/l, 48 hours LC ₅₀ Daphnia magna: 350 mg/l, 48 hours LC ₅₀ Lepomis macrochirus: 1140 mg/l, 96 hours |
| N-Methyl-2-pyrrolidone | Acute EC ₅₀ Scenedesmus subspicatus: >500 mg/l, 72 hours Acute EC ₅₀ Daphnia magna: >1000 mg/l, 24 hours Acute LC ₅₀ Oncorhynchus mykiss: >500 mg/l, 96 hours Chronic NOEC Daphnia magna: 12.5 mg/l, 21 days |
| Urea | EC ₁₀ Algae: 47 mg/l, 192 hours LC ₅₀ Daphnia magna: >10000 mg/l, 24 hours LC ₅₀ Leuciscus idus: >6810 mg/l, 96 hours |

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Ecotoxicity: May be harmful to aquatic life. In sufficient quantities it may deplete oxygen required by aquatic life. May cause eutrophication of ponds and lakes.

Persistence And Degradability: No data available.

Bioaccumulative Potential: No data available.

Mobility In Soil: No data available.

Other Adverse Effects: May release ammonium ions that are toxic to fish. Un-ionized ammonia concentrations above 0.02 mg/l are considered toxic in fresh water. May release phosphates, which will result in algae growth, increased turbidity and depleted oxygen. At extremely high concentrations, this may be hazardous to fish or other marine organisms. Release into waterways may cause effects downstream. OECD Guidelines 203, LC₅₀ – Rainbow trout: >86 mg/L, 96 hours.

Section 13 – Disposal Considerations

Disposal: All disposal practices must be in compliance with all Federal, State/Provincial and local laws and regulations. Regulations may vary in different locations. Waste characterizations and compliance with applicable laws are the responsibility solely of the waste generator. Organex Inc. has no control over the management practices or manufacturing processes of parties handling or using this material. The information presented here pertains only to the product as shipped in its intended condition as described in SDS Section 3: Composition/Information on Ingredients. For unused and uncontaminated product, the preferred options include sending to a licensed, permitted: reclaimer, landfill or wastewater treatment system.

Section 14 – Transport Information

UN Number: Not regulated.

UN Proper Shipping Name: Not regulated.

Transport Hazard Class (es): Not regulated.

Packing Group: Not regulated.

Environmental Hazards: No data available.

Transport In Bulk, If Applicable: No data available.

Special Precautions: No data available.

Section 15 – Regulatory Information

Canadian Regulations: This product has been classified in accordance with the hazard criteria of the HPR and the SDS contains all of the information required by the HPR.

Controlled Drugs And Substances Act: Not regulated.

Export Control List (CEPA 1999, Schedule 3): Not listed.

Greenhouse Gases: Not listed.

Precursor Control Regulations: Not regulated.

International Regulations:

Stockholm Convention: Not applicable.

Rotterdam Convention: Not applicable.

Kyoto Protocol: Not applicable.

Montreal Protocol: Not applicable.

Basel Convention: Dicyandiamide (CAS 461-58-5)

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International Inventories:

| Country(s)/Region | Inventory Name | On Inventory (Yes/No)* |
|-----------------------------|--|------------------------|
| Australia | Australian Inventory of Chemical Substances (AICS) | Yes |
| Canada | Domestic Substances List (DSL) | Yes |
| Canada | Non-Domestic Substance List (NDSL) | No |
| China | Inventory of Existing Chemical Substances in China (IECSC) | No |
| Europe | European Inventory of Existing Commercial Chemical Substances (EINECS) | No |
| Europe | European List of Notified Chemical Substances (ELINCS) | No |
| Japan | Inventory of Existing and New Chemical Substances (ENCS) | No |
| Korea | Existing Chemicals List (ECL) | No |
| New Zealand | New Zealand Inventory | No |
| Philippines | Philippine Inventory of Chemicals and Chemical Substances (PICCS) | No |
| United States & Puerto Rico | Toxic Substances Control Act (TSCA) Inventory | Yes |

* "Yes" indicates this product complies with the inventory requirements administered by the governing country(s).

"No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

Section 16 - Other Information

Revision Date: February 11, 2019

Abbreviations: ACGIH: American Conference of Governmental Industrial Hygienists

CAS: Chemical Abstract Service

EC50: Effective Concentration, 50%

LC50: Lethal Concentration, 50%

LD50: Lethal Dose, 50%

NFPA: National Fire Protection Association

NIOSH: National Institute for Occupational Safety and Health

OSHA: Occupational Safety and Health Administration

WHMIS: Workplace Hazardous Materials Information System

References: EPA: Acquire database
HSDB[®] - Hazardous Substances Data Bank
IARC Monographs. Overall Evaluation of Carcinogenicity
National Toxicology Program (NTP) Report on Carcinogens
ACGIH Documentation of the Threshold Limit Values and Biological Exposure Indices

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