

Green Trees & Plants II, LLC

Material Safety Data Sheet



BudPro®

Revision Date: 10/06/2011

Section 1 – Chemical Product and Company Identification

Product Name:	BudPro®
Synonyms:	Hydrogen Cyanamide, Cyanamid
Company:	Green Trees & Plants II, LLC. 3601 Canton Rd. Unit 11, Marietta, GA 30066, USA Tel: (678) 809-4505 Fax: (678) 466-7357
24 hour Chemtrec emergency phone number : 1-800-424-9300	
UN No.: 2922	

Section 2 – Composition, information of ingredient

Chemical nature: aqueous preparation with cyanamide

Pure		Solution	
MSDS Name	Hazardous ingredients	Percent	CAS No.
Cyanamide	Cyanamide 50-52.5%	50% in water	420-04-2
Monopotassium Phosphate	Phosphate	<1%	7778-77-0

Section 3 – Hazards identification

Hazardous classifications:	8.3 other corrosives.	
Exposure hazards:	Inhalation, swallowing, skin contact	
Potential health effects	May cause strong irritation to mucous membrane in eyes and some body parts like eyes. Cyanamide can irritate people's skin like caustic alkali. After four or five days, some eczema dermatitis that will cause both large reaction and pain will appear on ordinary skin. Reddening of the skin, hypotension, increased pulse frequency, nausea, feeling of burning, headache, irritation of skin and mucous membranes may occur.	
	Targeting organs	No record
	Eyes	Liquid may cause strong irritation and may cause serious eye inflammation.

	Skin	May cause serious irritation and may cause injury to skin.
	Ingestion	May cause digestive system inflammation if ingested.
	Inhalation	Liquid may cause strong irritation to the respiratory system.
	Chronic	No record.
Environmental hazards	No record	
Potential risk of explosion	Violent exothermic reaction if exposed to fire or temperatures exceeding the melting point, or polymerization with acids and bases.	

Section 4 – First Aid Measures

General advice:	If feeling unwell, seek medical advice. After absorbing large amounts of substance, immediately contact a doctor or Poisons Information Centre, and follow the advice given. Show this safety data sheet to the doctor in attendance.
Skin:	Flush skin immediately with plenty of soap and water for at least 15 minutes after removing contaminated clothing and shoes. If skin irritation occurs, call physician.
Eyes:	Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids, and consult a physician.
Ingestion:	Rinse out the mouth. Drink 1 to 2 glasses of water. DO NOT INDUCE VOMITING. Call a physician immediately.
Inhalation:	Move to a place with fresh air immediately. If no breath, give artificial respiration, if breathing is difficult, give oxygen. Consult a physician after significant exposure.
Note to physician:	Symptoms: nausea, increased pulse frequency, drop in blood pressure, feeling of burning, headache, irritation of skin and mucous membranes. Caution: Alcoholic beverages interact with cyanamide. Symptoms showing flush are possible (difficulty in breathing, bright red face). The symptoms of this interaction disappear rapidly and are generally harmless.

*** Hydrogen Cyanamide is not hydrogen cyanide and does not degrade to hydrogen cyanide. Do not induce vomiting or give any thing by mouth to an unconscious person.**

Section 5 – Fire Fighting Measure

Specific hazards during fire fighting:	Keep away from combustible materials. Avoid temperatures above 104°F. In the case of fire, the following hazardous smoke fumes may be produced: ammonia, nitrous gases, carbon oxides, and hydro-cyanic acid. As in any fire, high temperatures and oxidizers may cause acute decomposition or produce large amounts of heat from polymerization reaction and can cause explosion and fire. May cause burn to body or erode other metal materials.
Extinguishing media:	Use water spray, dry powder or sand, carbon dioxide, or appropriate foam.

Special fire fighting procedures:	Fireman should wear positive pressure, free-breathing devices, complete chemical protection clothes and shoes. Use water to cool exposed containers to extinguish fire. Do not contaminate surface water.
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Section 6 – Accidental Release Measures

Personal precautions	Use personal protective equipment. Avoid contact with skin, eyes and clothing. Ensure adequate ventilation
Environmental precautions:	Try to prevent the material entering drains or water sources.
Methods for cleaning up:	Absorb with liquid-binding materials. For example, saw dust, sand, or any inert material. Sweep or shovel into suitable containers with lids for disposal. Any waste must be removed according to local authority regulations. Then flush the site with water.

Section 7 – Handling and Storage

Safe handling advice:	Do not consume alcoholic beverages during the handling of cyanamide. Use protective clothing. Wash thoroughly after handling. Remove contaminated clothing and wash before reusing. Use adequate ventilation. Avoid direct contact with eyes, skin and clothing. Avoid ingestion and inhalation. Wear full face mask and eye protection. Handle in accordance with good industrial hygiene and safety practice.
Storage:	Keep in original container only and keep closed when not in use. Suitable materials for storage: polypropylene, polyethylene, enamel, and stainless steel. Keep out of the reach of children. Storage capability is limited; dependent on stabilization. Incompatible with acids and bases. Keep away from food, drink and animal feed. Protect from direct sunlight. Store in a cool, dry, well-ventilated area (under 68°F) and keep away from incompatible substances. Do not freeze.

Section 8 – Exposure Controls and Personal Protection

Exposure limits:	Cyanamide: 2 mg/m ³ (TWA, OSHA/ACGIH) Monopotassium phosphate: 1 mg/m ³ (TWA, OSHA/ACGIH)
Engineering control:	Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower. Use adequate ventilation.

Personal Protection

Respirators:	Use NIOSH-approved respirator in accordance with health/safety regulations.
Eye protection:	Avoid contact with eyes. Wear tightly fitting protective chemical splash goggles and face shield or approved equivalent.

Skin and body protection:	Wear appropriate chemical resistant overalls and rubber boots and rubber gloves. Avoid any skin exposure.
Hand protection:	Wear nitrile rubber gloves. Material thickness 0.7 mm. Change protective gloves regularly.
Hygiene measures:	No smoking, eating or drinking during handling. Change to clean clothes after washing and wash contaminated clothing before re-use. Wash hands before breaks and immediately after handling the product. Avoid alcoholic beverages 24 hours before, during and after handling this product.

Section 9 – Physical and Chemical Properties

Appearance and Physical State:	Dark blue liquid, without odor
Ph value:	4 – 4.9 at 68°F
Comparative concentration (water: 1):	1.07
Density (Kpa):	1.07 g (cm ³) (at 68°F)
Vapor pressure:	0.003hPa (at 68°F)
Flash point:	Not applicable
Solubility:	Completely Miscible in water
Main usage:	Plant growth regulator (PGR)

Section 10 – Stability and Reactivity

Chemical stability:	Stable between 40°F – 68°F. Store in cool and dry place not to exceed 68°F.
Conditions to avoid:	Keep away from direct sunlight and high temperatures.
Incompatibility with other materials:	Strong oxidizing agents, acids, bases, metals, alkalis, and combustible materials.
Hazardous decomposition products:	Ammonia
Hazardous reactions:	Violent, exothermic reaction. Danger of fire. Will not occur under normal conditions.

Section 11 – Toxicological Information

Acute toxicity:	Acute oral:	LD ₅₀ (Rat) = 313 mg/kg
	Acute dermal:	LD ₅₀ (Rabbit) = 1,700 mg/kg
	Acute dermal irritation:	(Rabbit) irritating
	Acute eye irritation:	(Rabbit) irritating
	Acute inhalation:	LC ₅₀ (Rat) > 2 mg/L
	Skin sensitization	Guinea pig: sensitizing
Mutagenicity assessment:	Not mutagenic in AMES test.	
Human experience:	Interacts with alcohol (ethanol). Irritating to eyes and skin.	

Section 12 – Ecological Information

Biodegradability:	Not readily biodegradable. Biodegradable in the soil. Decomposes under acid conditions (pH < 4) into urea, which is easily biodegradable.	
Ecotoxicity effects:	Toxicity to fish:	LC ₅₀ Oncorhynchus mykiss: 180 mg/l / 96h NOEC Oncorhynchus mykiss: 7.4mg/l/ 21d
	Toxicity to daphnia:	EC ₅₀ Daphnia magna: 6.5 mg/l/ 48h
	Toxicity to algae:	EC ₅₀ Pseudokirchneriella subcapitata: 13.2mg/l/ 90h
Further information:	Do not allow entrance into surface water/ water sources.	

Section 13 – Disposal Considerations

Waste disposal methods:	Waste and empty containers must be disposed of in accordance with federal, state, and local regulations and laws.
Container disposal:	Triple rinse then offer for recycling or proper disposal in a sanitary landfill. Do not reuse empty containers. Incineration is the preferred disposal method.

Section 14 – Transportation Information

Land transport

Class No:	8
ERG no. 154 Hazard subclass:	6.1
UN No:	2922
DOT proper shipping name:	Corrosive Liquid, Toxic, N.O.S. (Cyanamide)
Packing Group:	III
Orange warning plate:	86/ 2922

Sea transport IMDG Code

Class No:	8
Subsidiary risk:	6.1
UN No:	2922
Packing Group:	III
Proper shipping name:	Corrosive Liquid, Toxic, N.O.S. (Cyanamide)

Section 15 – Regulatory Information

OSHA Clear air act section 112:	This product containers “none” hazardous air pollutants.
SARA section 311/312:	This product contains none of the components listed as Extremely Hazardous substances.
TSCA:	This product or its components are listed in or exempt from the TSCA inventory requirements.

*** To avoid risks to man and the environment, comply with the instructions for use.**

Section 16 – Additional information

This version replaces all previous versions.

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