



Krop-Max™

Revision Date: 11/27/2007

SN: Tide-0301

Section 1. Chemical Product & Company Identification

Company: Zhejiang Tide CropScience Co., Ltd.
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24 Hour Chemtrec number: 1-800-424-9300

Product name: Krop-Max™

Product use: Plant growth regulator- for dormant spray

Section 2: Composition Information on Ingredients

Active ingredient	%	CAS #
Hydrogen Cyanamide	50%	420-04-2
Sodium phosphate (as buffer)	2%	7558-80-7
Water	48%	7732-18-5

Note: This product contains no chemicals known to the state of California to cause cancer and birth defects or other reproductive harm (see California State Prop 65 list)

OSHA regulatory Status: This material is classified as hazardous under OSHA regulations.

Section 3: Hazards Identification

Overview:

Corrosive. Causes irreversible eye damage and skin burns. May be fatal if swallowed or if absorbed through skin. Do not get in eyes, on skin, or on clothing. Harmful if inhaled. Avoid breathing spray mist. Prolonged or frequently repeated skin contact may cause allergic reactions in some individuals.

Potential Health Effects:

Eye contact: May cause severe corneal damage or corrosion of eyes if not washed immediately and thoroughly.

Skin contact: Harmful if absorbed through the skin. Contact causes burning sensations, smarting, inflammation, burns and painful blisters.

Inhalation: Harmful if inhaled. If misted, causes irritation of mucous membranes, nose, eyes and throat. May cause coughing and difficulty in breathing. May cause excessive tear formation, coughing, wheezing short of breath, nausea and vomiting. Corrosive, may cause burns resulting in permanent damage.

Ingestion: May cause "Cyanamide Flush", a transitory intense redness in the face, headache, nausea, vertigo, tachycardia, hypotension, and respiratory



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Note: distress. Corrosive and may cause severe and permanent damage to mouth, throat and stomach.
Acute effects may be intensified by exposure to ethanol. Do not consume alcoholic beverages prior to, during and within 24 hours of handling the product.

Section 4: First Aid Measures

If on skin or Clothing	• Take off contaminated clothing • Rinse skin immediately with plenty of water for 15-20 minutes • Call poison control center or doctor for treatment advice
If in eyes	• Hold eyes open and rinse slowly and gently with water for 15-20 minutes • Remove contact lenses, if present, after first 5 minutes, then continue rinsing eye. • Call a poison control center or doctor for treatment advice.
If swallowed	• Call poison control center or doctor immediately for treatment advice • Have person sip a glass of water if able to swallow • Do not induce vomiting unless told to do so by a poison control center or doctor. • Do not give any thing by mouth to an unconscious person.
If inhaled	• Move person to fresh air • If person is not breathing, call an ambulance, then give artificial respiration, preferably mouth –to-mouth, if possible • Call a poison control center of doctor for further treatment advice.

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 Measures:

OSHA Flammability Classification: None

Autoignition temperature: Not determined



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Other flammable properties: Burning will produce hazardous compounds including oxides of carbon, nitrogen, Burning/thermal decomposition will produce Hydrogen cyanide. Burning will produce fumes of ammonia.

Extinguishing Media: Solid stream of water may spread the fire. Do not use full jets of water. Use water spray of fog, foam, dry chemical or CO₂.

Firefighting Procedures: Wear protective clothing and self-contained breathing apparatus.

Section 6: Physical and chemical properties:

Appearance: Clear –light yellow liquid, odorless.

Density: Kg/m³ (g/ml) @ 20°C = 1.09×10^3 (1.09)

Specific heat: J/Kg (Cal/g) @ 20°C = 3.77×10^3 (0.9)

PH @ 20 °C: 4.0-6.0

Solubility in water: Miscible

Section 7: Toxicological Information:

Acute oral, LD₅₀ (Rat): 313 mg/Kg in females

Acute dermal, LD₅₀ (Rabbits): 1,707 mg/Kg in males, >5,050 mg/Kg in females

Acute dermal irritation (Rabbits): Slightly irritation

Acute eyes irritation (Rabbits): Moderately irritation

Inhalation, LC₅₀ (Rat): Greater than 2.32mg/L in males and females.

Skin sensitization (Guinea pigs): Do not elicit sensitizing reaction in guinea pig

Section 8: Ecological information/Environmental fate:

Acute EC₅₀-96 hrs: 145.34 mg/L (*Oncorhynchus mykiss*)-Fish

Acute EC₅₀-48 hrs: 6.24 mg/L (*Daphania*)

Acute Oral LD₅₀: 1,201 mg/Kg to northern bobwhite

Section 9: Accidental Release Measures

Steps to be taken in case of material is released or spilled: Ventilate area, Absorb spill with inert material and place in a chemical waste container. Obey relevant local, state, provincial and federal laws and regulations. Do not contaminate any lakes, streams, ponds ground water or sol.

Section 10: Handling and Storage

Handling:

Use with adequate ventilation



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Do not breathe vapor or mist. Do not get in eyes, on skin or clothing.
Avoid contact with acids, or bases.
Do not use when temperature is above 40°C.
Wash thoroughly after handling
Remove contaminated clothing & wash before re-use
Follow MSDS/Label precautions.

Storage:

Store in cool and dry place not to exceed 68°F (20°C), away from alkaline, acidic and oxidizing materials.
Do not store near combustible materials and/or direct sunlight
Keep container closed when not in use.

Section 11: Exposure control/personal Protection Information

Exposure limits:

Cyanamide: 2 mg/m³ (TWA, OSHA/ACGIH)

Phosphoric acid: 1 mg/m³ (TWA, OSHA/ACGIH)

Use adequate ventilation.

Respiratory protection: A NIOSH's respirator is required whenever work place conditions warrant respirator use.

Eye Protection: Use chemical splash goggles and face shield (ANSI Z87.1 or approved equivalent).

Skin Protection: Use impermeable gloves and apron

Follow OSHA recommended PPE standard (29CFR1910.132) be conducted before using this product. Follow Product label-personal protective equipment.

Section 12: Stability & Reactivity

Stability: Store in cool and dry place not to exceed 68°F (20°C)

Hazardous polymerization: Will not occur under normal conditions.

Conditions to avoid: High temperature and direct sunlight

Incompatibility with other materials: Acids, basics, metals, alkalis, and combustible material.

Hazardous decomposition products: Ammonia

Section 13: Disposal considerations

Waste and empty container must be disposed of in accordance with local State, provincial Federal regulations and laws. Incineration is the preferred method.



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Section 14: Transportation information

DOT proper shipping name: Corrosive liquid, Toxic, N.O.S.
Technical name: Hydrogen Cyanamide 50% solution
Hazard class: 8
Packing Group: II
UN number: 2922
ERG no: 154 Hazard subclasses: 6.1

Section 15: Regulatory Information

OSHA: Clear air act section 112: This product contains “none” hazardous air pollutants.

SARA section 311/312: This product contains the following components listed as Extremely Hazardous substances: None

TSCA: This product or its components are listed in or exempt from the TSCA inventory requirements.

This product contains the following non-hazardous components subject to disclosure under New Jersey and Pennsylvania right-to-know legislation:

Water, CAS # 7732-18-5

Section 16: Other information

HMIS Ratings: Health -2 Flammability-1 Reactivity-2

NFPA Ratings: Health -2 Flammability-1 Reactivity - 2

Rating key: 4=Highest hazard, 0=lowest hazard N- No rating for powders

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