

1. IDENTIFICATION

Product name: **Redi-Pik® 1.5EC Cotton Defoliant**
Chemical name of active ingredient(s): Thidiazuron: N-phenyl-N'-1,2,3-thiadiazol-5-ylurea
Diuron: 3-(3,4-dichlorophenyl)-1,1-dimethylurea
Registrant: Makhteshim Agan of North America, Inc.
4515 Falls of Neuse Road, Suite 300
Raleigh, NC 27609
Phone: 919-256-9300
For fire, spill, and/or leak emergencies, contact Phone: 1-800-535-5053
Infotrac:
For medical emergencies and health and safety Phone: 1-877-250-9291
inquiries, contact Prostar:

2. COMPOSITION/INFORMATION ON INGREDIENTS

COMMON NAME	CAS NO.	%	OSHA PEL	ACGIH TLV	OTHER	NTP/IARC/OSHA (Carcinogen)
Thidiazuron	51707-55-2	12.0	NE	NE	NE	NA
Diuron	330-54-1	6.0	10 mg/m ³	10 mg/m ³	NE	NA
NE=not established						
NA=not available						

3. HAZARDS IDENTIFICATIONS

PHYSICAL PROPERTIES

Appearance: Amber to brown liquid
Odor: Slight amine-like

EMERGENCY OVERVIEW: DANGER. Corrosive. Causes skin burns. Causes irreversible eye damage. Harmful if absorbed through skin. Do not get in eyes, on skin, or on clothing. Harmful if inhaled. Avoid breathing mist. Prolonged or frequently repeated skin contact may cause allergic reactions in some individuals.

PRIMARY ROUTES OF EXPOSURE: Mist inhalation, skin contact

IMMEDIATE EFFECTS:

Eye: Corrosive-causes irreversible eye damage. Do not get in eyes. May cause eye irritation.

Skin: Irritating to skin. Cause moderate to severe skin irritation on prolonged contact. Prolonged or frequently repeated skin contact may cause allergic reactions in some individuals.

Ingestion: Harmful if swallowed. Ingestion may cause blisters/tissue damage of the mouth, throat, and digestive tract.

Inhalation: Harmful if inhaled. Prolonged inhalation of mist may cause coughing and difficulty in breathing.

HAZARDOUS DECOMPOSITION PRODUCTS: Thermal decomposition products: carbon, nitrogen and sulfur oxides, and aldehydes.

PHYSICAL OR CHEMICAL HAZARDS: Do not use or store near heat or open flame.

4. FIRST AID MEASURES

IF ON SKIN OR CLOTHING:	<ul style="list-style-type: none"> Take off contaminated clothing. Rinse skin immediately with plenty of water for 15-20 minutes. Call a poison control center or doctor for treatment advice.
IF IN EYES:	<ul style="list-style-type: none"> Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing. Call a poison control center or doctor for treatment advice.
IF INHALED:	<ul style="list-style-type: none"> Move person to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth if possible.

	<ul style="list-style-type: none">• Call a poison control center or doctor for further treatment advice.
IF SWALLOWED:	<ul style="list-style-type: none">• Immediately call a poison control center or doctor for treatment advice.• Do not induce vomiting unless told to do so by a poison control center or doctor.• Have person sip a glass of water if able to swallow.• Do not give anything by mouth to an unconscious person.
Have the product container or label with you when calling a poison control center or doctor or going for treatment. For emergency medical treatment information, contact Prosar at 1-877-250-9291.	
NOTE TO PHYSICIAN: Probable mucosal damage may contraindicate the use of gastric lavage.	

5. FIRE FIGHTING MEASURES

FLASH POINT: >225° F (107° C)

FLAMMABLE LIMITS: LFL/UFL: Not applicable.

EXTINGUISHING MEDIA: Foam, sand, dry powder, carbon dioxide (CO₂), water spray.

UNUSUAL FIRE, EXPOSURE AND REACTIVITY HAZARDS: May decompose at high temperatures and give off poisonous oxides.

HAZARDOUS DECOMPOSITION PRODUCTS: Thermal decomposition products: carbon, nitrogen and sulfur oxides; and aldehydes.

FIRE-FIGHTING PROCEDURES: Do not use a solid water stream as it may scatter and spread fire. Use water spray cautiously. Cool closed containers exposed to fire with water spray. Keep out of smoke. Fight fire from upwind position. Dike area to prevent runoff and contamination of water sources. Equipment or materials involved in pesticide fires may become contaminated. Wear self-contained breathing apparatus and protective suit.

6. ACCIDENTAL RELEASE MEASURES

ACTION TO TAKE FOR SPILLS/LEAKS: Keep unauthorized people away. Isolate hazard area. Avoid contact with spilled product or contaminated surfaces.

Avoid breathing vapors and avoid skin contact. Use personal protective equipment. Dike contaminated area with absorbent granules, soil, sand, etc. Carefully sweep up absorbed spilled material. Place contaminated material in appropriate container for disposal. Wash the spill area with water containing a strong detergent, absorb with pet litter or other absorbent material, sweep up and place in a chemical container. Contaminated soil may have to be removed and disposed. Do not allow material to enter streams, sewers, or other waterways or contact vegetation.

7. HANDLING AND STORAGE

Do not contaminate water, food, or feed by storage or disposal.

PRECAUTIONS TO BE TAKEN IN HANDLING: Do not get in eyes, on skin, or on clothing. Do not breathe vapours or spray mist.

PRECAUTIONS TO BE TAKEN IN STORAGE: Do not use, pour or store near heat or open flame. Store in original container and keep closed. Store in a cool, dry place. Do not use or store near heat or open flame. Do not contaminate food or foodstuffs.

STORAGE TEMPERATURE: Normal ambient temperatures.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

THE FOLLOWING RECOMMENDATIONS FOR EXPOSURE CONTROLS/PERSONAL PROTECTION ARE INTENDED FOR THE MANUFACTURE, FORMULATION, PACKAGING AND USE OF THIS PRODUCT.

FOR COMMERCIAL APPLICATIONS AND/OR ON-FARM APPLICATIONS CONSULT THE PRODUCT LABEL.

EYE PROTECTION: Protective eyewear (e.g., goggles or full-face shield or shielded safety glasses).

SKIN PROTECTION: Coveralls over long pants and long-sleeved shirt, chemical resistant footwear plus socks.

HAND PROTECTION: Chemical-resistant gloves, such as barrier laminate or butyl rubber.

RESPIRATOR REQUIREMENTS: When respirators are required, select NIOSH approved equipment based on actual or potential airborne concentrations and in accordance with the appropriate regulatory standards and/or Industry recommendations.

ADDITIONAL PROTECTIVE MEASURES: Discard clothing and other absorbent materials that have been drenched or heavily contaminated with this product's concentrate. Do not reuse them. Follow manufacturer's instructions for cleaning and maintaining PPE. If no such instructions for washables, use detergent and hot water. Keep and wash PPE separately from other laundry.

USER SAFETY RECOMMENDATIONS:

Users should:

- Wash hands before eating, drinking, chewing gum, using tobacco, or using the toilet.
- Remove clothing immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.
- Remove PPE immediately after handling this product. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.

EXPOSURE GUIDELINES: Refer to Section 2.

ENGINEERING CONTROLS: Refer to product label.

9. PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE: Amber to brown liquid

ODOR: Slight amine-like

FLASH POINT: >225°F (107°C)

BOILING POINT: 212°F - 293°F (100°C - 145°C)

SOLUBILITY IN H₂O: Emulsifiable slightly soluble

SPECIFIC GRAVITY: 0.978

10. STABILITY AND REACTIVITY

STABILITY: Stable under normal use and storage conditions.

CONDITIONS AND MATERIALS TO AVOID: May decompose at high temperatures and give off poisonous oxides.

HAZARDOUS POLYMERIZATION: Not known to occur.

HAZARDOUS DECOMPOSITION PRODUCTS: Thermal decomposition products: carbon, nitrogen and sulfur oxides, and aldehydes.

11. TOXICOLOGICAL INFORMATION

ACUTE TOXICITY/IRRITATION STUDIES

Acute Oral LD ₅₀ (Rat):	>5,000 mg/kg
Acute Dermal LD ₅₀ (Rabbit):	>4,000 mg/kg
Acute Inhalation LC ₅₀ (Rat):	2.0 mg/l (4 hr.)
Eye Irritation:	Corrosive.
Dermal Irritation:	Mildly irritating.
Dermal Sensitization (Guinea pig):	A positive skin sensitizer.

SUBCHRONIC TOXICITY

THIDIAZURON: In a 90-day toxicity study in rats, thidiazuron caused only general toxicity (e.g., reduced body weight gain) at dose levels below those exhibiting overt toxicity due to excessively high doses. In the dog, subchronic exposure provided no evidence of a toxicological response.

DIURON: Signs of slight hemolytic anemia and hepatic enzyme induction occurred following repeated administration of diuron in subchronic toxicity studies in rats.

CHRONIC TOXICITY

THIDIAZURON: In chronic feeding studies, thidiazuron caused only general toxicity in rats, e.g. reduced body weight gains, and transient hemolytic anemia in dogs.

DIURON: Long-term exposure to high-doses of diuron caused hemolytic anemia and/or organ effects (liver, kidney, spleen, urinary bladder) in chronic feeding studies in rats and dogs.

ASSESSMENT CARCINOGENICITY

THIDIAZURON: Thidiazuron was not carcinogenic in oncogenicity studies in rats and mice.

DIURON: In lifetime feeding studies, diuron was shown to cause urinary bladder tumors in rats and mammary tumors in female mice only at high exposure levels. In vitro and in vivo genotoxicity studies showed no evidence of mutagenic or genotoxic potential for diuron.

REPRODUCTIVE AND DEVELOPMENTAL TOXICITY

Reproductive:

THIDIAZURON: Thidiazuron was not a reproductive toxicant in rats.

DIURON: In a two-generation reproduction study in rats treated with diuron, pup body weights were reduced at the maternally toxic high dose.

Developmental:

THIDIAZURON and DIURON are not primary developmental toxicants in rats and rabbits.

Developmental/offspring effects were observed at high doses but were considered secondary to maternal toxicity.

MUTAGENICITY:

THIDIAZURON and DIURON are not considered genotoxic or mutagenic.

12. ECOLOGICAL INFORMATION

ENVIRONMENTAL HAZARDS: Do not apply directly to water, or to areas where surface water is present, or to intertidal areas below the mean high water mark. Do not contaminate water by cleaning of equipment or disposal of equipment washwaters. Do not apply when weather conditions favor drift from the target area. Apply this product only as specified on this label.

13. DISPOSAL CONSIDERATIONS

END USERS MUST DISPOSE OF ANY UNUSED PRODUCT AS PER THE LABEL RECOMMENDATIONS.

PESTICIDE DISPOSAL: Pesticide wastes are acutely hazardous. Improper disposal of excess pesticide, spray mixture, or rinsate is a violation of Federal law. If these wastes cannot be disposed of by use according to label instructions, contact your State Pesticide or Environmental Control Agency, or the Hazardous Waste representative at the nearest EPA Regional Office for guidance.

CONTAINER DISPOSAL: Dispose of product containers, waste containers, and residues according to label instructions and local, state, and federal health and environmental regulations.

14. TRANSPORT INFORMATION

DOT CLASSIFICATION:

Not regulated

INTERNATIONAL TRANSPORTATION

IMO (vessel): Not regulated

IATA (air): Not regulated

15. REGULATORY INFORMATION

CANADIAN REGULATIONS:

This product has been classified in accordance with the hazard criteria of the CPR and the MSDS contains all the information required by the CPR.

Canadian Domestic Substance List

Diuron (CAS# 330-54-1)

1-octyl-2-pyrrolidone (CAS# 2687-94-7)

1-dodecyl-2-pyrrolidone (CAS# 2687-96-9)

SARA TITLE III CLASSIFICATION:

Section 302: Not applicable.

Section 311/312: Acute health hazard (immediate)

MATERIAL SAFETY DATA SHEET

Redi-Pik® 1.5EC Cotton Defoliant

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Section 313: Diuron (6%) CAS #: 330-54-1

CA PROPOSITION 65: This product contains a substance (diuron) that is known by the State of California to cause cancer.

CERCLA RQ: Diuron RQ=100 lbs.

RCRA CLASSIFICATION: Under RCRA, it is the responsibility of the product user to determine at the time of disposal, whether a material containing the product or derived from the product should be classified as a hazardous waste.

TSCA STATUS: The ingredients of this product are listed on the TSCA inventory or are exempt.

16. OTHER INFORMATION

NFPA HAZARD RATINGS

		NFPA	
HEALTH:	3	0	MINIMAL
FLAMMABILITY:	1	1	SLIGHT
REACTIVITY:	0	2	MODERATE
		3	HIGH
		4	SEVERE

MSDS DATE: 4-9-09. Supersedes version dated 3-4-08. Changes made to Sections 2 and 13.

The information herein is given in good faith, but no warrant, express or implied, is made. Consult Makhteshim Agan of North America, Inc. for further information.