

**SAFETY DATA SHEET
DIRECT AG SOURCE, LLC
DETACH ULTRA**

1. IDENTIFICATION

PRODUCT NAME:	DETACH ULTRA
EPA REGISTRATION NO. :	83222-9
CHEMICAL NAME OF ACTIVE INGREDIENT(S):	Thidiazuron: N-phenyl-N'-1,2,3-thiadiazole-5-ylurea
PRODUCT TYPE:	Cotton defoliant
COMPANY NAME:	Direct Ag Source, LLC 30473 260 th St. Eldora, IA 50627 Phone: 1-800-424-9300
FOR MEDICAL AND CHEMICAL EMERGENCIES, SPILL, LEAK, FIRE, EXPOSURE, OR ACCIDENT, CALL CHEMTREC:	
FOR EMERGENCY MEDICAL TREATMENT INFORMATION, CALL NATIONAL POISON CONTROL CENTER:	Phone: 1-800-222-1222
FOR PRODUCT INFORMATION, CALL NATIONAL PESTICIDE INFORMATION CENTER:	Phone: 1-800-858-7378

2. HAZARDS IDENTIFICATIONS

THE FOLLOWING HAZARDS ARE IDENTIFIED ACCORDING TO OSHA HCS CLASSIFICATION (29 CFR 1910.1200).

HAZARD CLASSIFICATIONS:

- Acute oral toxicity: Category 4
- Eye irritation: Category 2B
- Skin irritation: Category 2
- Specific target organ toxicity (repeated exposure) - Category 2

SIGNAL WORD: WARNING

PICTOGRAMS:



HAZARD STATEMENTS:

- Harmful if swallowed
- Causes eye irritation
- Causes skin irritation
- Causes damage to lungs through prolonged or repeated exposure if inhaled

PRECAUTIONARY STATEMENTS:

- Wash hand thoroughly after handling. Do not eat, drink or smoke when using this product. If swallowed, immediately call a poison center or a doctor. Rinse mouth.
- Wash hand thoroughly after handling. Wear protective gloves. If on skin: wash with plenty of water. If skin irritation occurs: get medical advice or attention. Take off contaminated clothing and wash it before reuse.
- Wash hand thoroughly after handling. If in eyes: rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a poison center or a doctor.
- Do not breathe vapor/mist/spray. Get medical advice or attention if you feel unwell.

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Contact Chemtrec for emergency medical treatment at 1- 800-424-9300.

STORAGE AND DISPOSAL: See Section 7 and 13.

PHYSICAL AND CHEMICAL HAZARDS: This product is incompatible with strong oxidizing agents such as nitrates, chlorine bleach, or hydrogen peroxide.

OTHER HAZARDS: See Section 11 and 12.

3. COMPOSITION/INFORMATION ON INGREDIENTS

COMMON NAME	CAS NO.	%
Thidiazuron	51707-55-2	42.4
Other Ingredients, containing:		
Proprietary component	Proprietary	2
Sodium hydroxide	1310-73-2	0.1 – 0.5
Propylene Glycol	57-55-6	4.75- 5.25
Xanthan Gum	11138-66-2	0.25

4. FIRST AID MEASURES

FIRST AID

IF ON SKIN OR CLOTHING:	<ul style="list-style-type: none">• Take off contaminated clothing.• Rinse skin immediately with plenty of water for 15 to 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 eye.• 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 by mouth-to-mouth, if possible.• Call a poison control center or doctor for further treatment advice.
IF SWALLOWED:	<ul style="list-style-type: none">• Immediately call poison control center or doctor immediately for treatment advice.• Have a 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 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 information on this product, contact the National Pesticide Information Center, 1-800-858-7278, Monday-Friday, 7:30 AM-3:30 PM PST. You may also contact the National Poison Control Center, 1-800-222-1222, day or night, for emergency medical treatment.

5. FIRE FIGHTING MEASURES

FLASH POINT: NA (water based)

AUTOIGNITION TEMPERATURE: Not available

FLAMMABLE LIMITS: Not applicable

EXTINGUISHING MEDIA: Carbon dioxide (CO₂), dry powder, foam, water.

FIRE FIGHTING PROCEDURES: Keep unnecessary people away, isolate hazard area and deny entry. Avoid contact with spilled product or contaminated surfaces. Dike area to prevent runoff and contamination of water sources. Fight fire from upwind position. Cool closed containers exposed to fire with water spray. Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.

PROTECTIVE EQUIPMENT FOR FIREFIGHTERS: Firefighters should wear NIOSH approved self-contained breathing apparatus and full protective clothing.

6. ACCIDENTAL RELEASE MEASURES

ACTION TO TAKE FOR SPILLS/LEAKS: Keep unnecessary personnel away. Do not touch or walk through spilled material. In case of spillage or leakages, eliminate all ignition sources. Shovel or sweep up. Avoid dust formation. Dispose of with chemical waste. Remove any contaminated soil. Place in closed, labeled containers and store in a safe place until disposed. Do not contaminate water while cleaning equipment or disposing of wastes. Prevent entry into waterways, sewers, basements or confined areas. Use proper protective equipment to minimize exposure. Take all necessary actions to prevent and to remedy the adverse effects of the spill. Ensure that the disposal is in compliance with federal requirements and state or local regulations.

7. HANDLING AND STORAGE

PRECAUTIONS TO BE TAKEN IN HANDLING: Do not contaminate water, food or feed by storage or disposal. Handle and open container in a manner as to prevent spillage. Handle in accordance with food industrial hygiene and safety practice. Wash hands before eating, drinking, chewing gum, using tobacco, or using the toilet or applying cosmetics.

PRECAUTIONS TO BE TAKEN IN STORAGE: Store product at temperature less than 100°F. Re-mix product prior to use if product is exposed to freezing conditions.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

GENERAL PROTECTIVE MEASURES: Wash thoroughly with soap and water after handling. 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.

SKIN/HAND PROTECTION: Coveralls over long-sleeved shirt and pants. Chemical-resistant gloves. Chemical – resistant footwear plus socks.

EYE/FACE PROTECTION: Protective eyewear.

RESPIRATOR REQUIREMENTS: None required. Use NIOSH approved air purifying respirator or filtering face piece with N or P class filter when working in non-ventilated areas.

USER SAFETY RECOMMENDATIONS:

Users should:

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

ENGINEERING CONTROLS: See product label. Ensure adequate ventilation, especially in confined areas. Control airborne concentrations below the exposure guidelines.

EXPOSURE LIMITS:

Chemical Name	CAS NO.	ACGIH/TLV	OSHA/PEL	OTHER
Sodium Hydroxide	1310-73-2	2 mg/m ³ (Ceiling)	2mg/m ³ (TWA)	NE
Propylene Glycol	57-55-6	NE	NE	10 mg/m ³ *
Xanthan Gum	11138-66-2	NE	15mg/m ³ (total dust) (8h TWA) 5mg/ ³ (respirable) (8h TWA)	NE

NE: Not Established. * WEEL.

9. PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE: Cream liquid

ODOR: Slight solvent

ODOR THRESHOLD: Not available

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pH: 5.81

FLASH POINT: Not applicable (water based)

DENSITY: 1.164 g/cm³ (9.72 lbs/gal) @24°C

WATER SOLUBILITY: Not available

VISCOSITY: Not available

FLAMMABILITY (Solid, Gas): Not applicable

UPPER/LOWER FLAMMABILITY/EXPLOSIVE LIMITS: Not available

AUTO-IGNITION TEMPERATURE: Not available

EXPLODABILITY: Not applicable

SOLUBILITY: Not available

PARTITION COEFFICIENT (n-OCTANOL/WATER): Not available

VAPOR PRESSURE: Not available

VAPOR DENSITY: Not available

MELTING POINT/FREEZING POINT: Not applicable

BOILING POINT: Not available

EVAPORATION RATE: Not available

DECOMPOSITION TEMPERATURE: Not available

10. STABILITY AND REACTIVITY

STABILITY: This product is stable under normal use and storage. Unstable at elevated temperatures.

CONDITIONS TO AVOID: Freezing temperature.

MATERIALS TO AVOID: Strong oxidizing agents.

HAZARDOUS DECOMPOSITION PRODUCTS: May release irritating and toxic gases due to thermal decomposition.

HAZARDOUS POLYMERIZATION: Not known to occur.

11. TOXICOLOGICAL INFORMATION

ACUTE TOXICITY/IRRITATION STUDIES:

Acute Oral LD50 (Rat): > 500 - < 5,000 mg/kg (male and females)

Acute Dermal LD50 (Rat): >5,000 mg/kg (male and female)

Acute Inhalation LC50 (Rat): >4.33 mg/L (4-hr) (male and female)

Eye Irritation: Minimally irritating.

Skin Irritation: Slightly irritating.

Dermal Sensitization (Guinea Pig): Not a skin sensitizer

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

Carcinogenicity Assessment:

Crystalline silica (quartz) component (< 0.1 % in the product) is classified as a carcinogen by NTP and IARC.

ACGIH: A2*

NTP : 1 **

IARC : 1 ***

OSHA : None

*ACGIH: A2: Suspected human carcinogen

*IARC Group 1: The agent (mixture) is carcinogenic to humans.

**NTP Group 1: Substances or groups of substances, and medical treatments that are known to be carcinogenic.

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REPRODUCTIVE AND DEVELOPMENTAL TOXICITY: Thidiazuron is not a reproductive toxicant. Thidiazuron is not a primary developmental toxicant based on developmental toxicity studies in rats and rabbits. Developmental effects observed at high doses were secondary to maternal toxicity.

TERATOLOGY (BIRTH DEFECTS): Thidiazuron - No teratogenic effects were observed in rabbits or in rats at dose levels up to 250 mg/kg/day and 300 mg/kg/day, respectively.

MUTAGENICITY (EFFECTS ON GENETIC MATERIAL): Thidiazuron technical is not mutagenic or genotoxic when tested in the Ames gene mutation assay and in several other mutagenesis systems.

SPECIFIC TARGET ORGAN TOXICITY- REPEATED EXPOSURE (STOT):

Propylene Glycol – In rare cases, repeated or prolonged exposure may cause central nervous system effects.

The Proprietary Component – Inhalation – Causes damage to organs through prolonged or repeated exposure – Lungs.

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 when disposing of equipment wash water or rinsate. This product may contaminate water through drift of spray in wind. This product has a high potential for runoff for several months or more after application. Poorly draining soil and soils with shallow water tables are more prone to produce runoff that contains this product. A level, well-maintained vegetative buffer strip between areas to which this product is applied and surface water features such as ponds, streams, and springs will reduce the potential for contamination of water from runoff. Runoff of this product will be reduced by avoiding applications when rainfall is forecasted to occur within 48 hours. Sound erosion control practices will reduce this product's contribution to surface water contamination.

This chemical has properties and characteristics associated with chemicals detected in ground water. Use of this chemical in areas where soils are permeable, particularly where the water table is shallow, may result in groundwater contamination.

ECOTOXICITY INFORMATION: (Based on Thidiazuron Technical)

Rainbow trout LC₅₀ (96h): > 19 mg/L

Bluegill sunfish LC₅₀ (96h): 32 mg/L

Daphnia EC₅₀ (48h): > 10 mg/L

Japanese quail acute oral toxicity LD₅₀ : >3160 mg/kg

Earthworms LC₅₀ (14d): > 1400 mg/kg

ENVIRONMENTAL FATE: Thidiazuron is strongly adsorbed by soil, with half-lives in soil of 28 to 144 days in aerobic soil and 28 days in anaerobic soils.

13. DISPOSAL CONSIDERATIONS

PESTICIDE DISPOSAL: Do not contaminate food, feed, or water by storage or disposal. Open dumping is prohibited. Pesticide wastes are toxic. Improper disposal of excess waste 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.

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IMDG: Not regulated

IATA: Not regulated

15. REGULATORY INFORMATION

FIFRA INFORMATION:

This chemical is a pesticide product registered by the Environmental Protection Agency and is subject to certain labeling requirements under federal pesticide law. These requirements differ from the classification criteria and hazard information for safety data sheet, and for workplace labels of non-pesticide chemicals. Following is the hazard information as required on the pesticide label.

CAUTION Harmful if swallowed, inhaled, or absorbed through the skin. Avoid breathing spray mist. Avoid contact with skin, eyes, and clothing.

SARA TITLE III CLASSIFICATION:

Section 302: Not applicable.
Section 311/312: Acute health hazard (immediate)
Chronic health hazard (delayed)
Section 313: Not applicable

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: All ingredients are listed on the TSCA inventory or are not required to be listed on the TSCA inventory.

CA PROPOSITION 65:

This product contains less than 0.1% of chemicals (Propylene oxide; Ethylene oxide; Silica, crystalline) known to the state of California to cause cancer.

This product contains less than 1% of chemical (Ethylene oxide) known to the State of California to cause birth defects of other reproductive harm.

STATE RIGHT-TO-KNOW: The following product components are cited on certain state lists as mentioned. Non-listed components may be shown in the composition section of the MSDS.

<u>Chemical Name</u>	<u>CAS Number</u>	<u>List</u>
Thidiazuron	51707-55-2	NJ, PA
Crystalline silica (Quartz)	14808-60-7	NJ, PA, MA
PEG/PPG (n/n) Copolymer	9003-11-6	NJ, PA

16. OTHER INFORMATION

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

SDS DATE: 6-11-2015. Supersedes version dated 8-23-2007. Changes made to all sections.

The information herein is presented in good faith and believed to be accurate as of the effective date shown above. However, no warranty, express or implied, is given. Regulatory requirements are subject to change and may differ from one location to another; it is the buyer's responsibility to ensure that its activities comply with federal, state, or provincial, and local laws.