

**MATERIAL SAFETY DATA SHEET****SECTION 1 - CHEMICAL PRODUCT AND COMPANY IDENTIFICATION****COMPANY ADDRESS:**

ARYSTA LIFESCIENCE N.A.  
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CARY, NC 27513

**EMERGENCY TELEPHONE NUMBERS:**

(800) 424-9300 (CHEMTREC, transportation and spills)  
(866) 303-6952 (Poison Control Center for both Human  
and Animal Health)

PRODUCT NAME: Adios™ Cotton Defoliant

CHEMICAL NAME: N-pheny-N'-(1,2,3-thidiazol-5'yl)-urea and 3-(3,4-dichlorophenyl)-1,1-dimethylurea

CHEMICAL FAMILY: Mixture

PRODUCT CODE: EPA Reg. No. 66330-344

**SECTION 2 - COMPOSITION, INFORMATION OF INGREDIENTS**

COMPONENT	PERCENTAGE	CAS NUMBER	OSHA PEL	ACIGH TLV
Thidiazuron	12.0	51707-55-2	Not est.	Not est.
Diuron	6.0	330-54-1	10ppm	10ppm
Inert ingredients	82.0		Not listed	Not listed

**SECTION 3 - HAZARDS IDENTIFICATION SUMMARY**

(As defined by OSHA Hazard Communication Standard, 29 CFR 1910.1200)

**EMERGENCY OVERVIEW:** Off-white liquid with faint odor

- May be harmful if swallowed, inhaled or absorbed through skin.
- Avoid breathing vapor or spray mist.
- Causes mild eye irritation.
- Avoid contact with eyes, skin or clothing.
- Keep out of reach of children.

**POTENTIAL HEALTH HAZARDS:**

INGESTATION - May be harmful if swallowed.

INHALATION - Harmful if inhaled. Prolonged vapor or spray mist inhalation can cause central nervous system effects.

EYE - Mildly irritating to the eyes. Degree of injury will depend on the amount of material that gets into eye and the speed and thoroughness of the first aid treatment.

SKIN - Prolonged or repeated skin contact may cause irritation.

NOTE TO PHYSICIAN: Supportive Care and symptomatic treatment. A mild eye and respiratory irritant

**ENVIRONMENTAL HAZARDS:** Toxic to fish and water invertebrates.

#### **SECTION 4 - FIRST AID MEASURES**

##### **FIRST AID**

**IF SWALLOWED:** Call a 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 anything by mouth to an unconscious or convulsing person.

**IF INHALED:** 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. Call a poison control center or doctor for further treatment advice.

**IF ON SKIN OR CLOTHING:** 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:** 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.

**ANTIDOTE:** No known antidote. Treat symptomatically

#### **SECTION 5 - FIRE FIGHTING MEASURES**

**FLASHPOINT (method):** does not flash

**FLAMMABLE LIMITS (LEL-UFL):** not determined

**FIRE AND EXPLOSION HAZARD:** Can burn in fire, releasing irritating and toxic gases due to thermal decomposition or combustion.

**EXTINGUISHING MEDIA:** Use foam, dry chemical, carbon dioxide, or water spray when fighting fires involving this material.

**FIRE FIGHTING INSTRUCTIONS:** Evacuate area and fight fire upwind from a safe distance to avoid hazardous vapors and decomposition products. Fire exposed containers can build up pressure and should be kept cool with water spray if possible. Explosive vapor could form from ruptured containers. Dike and collect water used to fight fire to prevent environmental damage due to run off. Foam or dry chemical fire extinguishing systems are preferred to prevent environmental damage from excessive water run off.

**FIRE FIGHTING EQUIPMENT:** Self-contained breathing apparatus with full facepiece. Full fire fighting turn-out gear (Bunker gear).

**HAZARDOUS COMBUSTION PRODUCTS:** Unknown.

#### **SECTION 6 - ACCIDENTAL RELEASE MEASURES**

Clean up spills immediately, observing precautions in Section 8 of this document. Isolate hazard area. Keep unnecessary and unprotected personnel from entering.

**SMALL SPILL:** Absorb small spills on sand, vermiculite or other inert absorbent. Place contaminated material in appropriate container for disposal.

**LARGE SPILL:** Dike large spills using absorbent or impervious material such as clay or sand. Recover and contain as much free liquid as possible for reuse. Allow absorbed material to solidify, and scrape up for disposal. After removal, scrub the area with detergent and water and neutralize with dilute alkaline solutions of soda ash, or lime. Pick up wash liquid with additional absorbent and place in a disposable container.

## **SECTION 7 - HANDLING AND STORAGE**

**HANDLING:** Handle and open container in a manner as to prevent spillage.

**STORAGE:** Store in a cool, dry place, away from open flame and extreme heat, and in such a manner as to prevent cross contamination with other pesticides, fertilizers, food, and feed. Store in original container and out of reach of children, preferably in a locked storage area. Do not contaminate water, food or feed by storage or disposal.

## **SECTION 8 - EXPOSURE CONTROLS, PERSONAL PROTECTION**

**EXPOSURE LIMITS** (8 hour TWA, ppm):

OSHA PEL - 10 mg/m<sup>3</sup>

ACGIH TLV - 10 mg/m<sup>3</sup>

**ENGINEERING CONTROLS:** Proper ventilation is required when handling or using this product to minimize exposure to airborne contaminants. Local exhaust ventilation may be necessary. Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower.

**EYE PROTECTION:** Protective eyewear.

**CLOTHING:** Coveralls over long-sleeved shirt and long pants. Chemical-resistant footwear plus socks. Chemical-resistant headgear for overhead exposure. Chemical-resistant apron when cleaning equipment, mixing or loading.

**GLOVES:** Chemical-resistant gloves, such as barrier laminate, butyl rubber, nitrile rubber or viton

**RESPIRATOR:** For exposures in enclosed areas, a respirator with either an organic vapor-removing cartridge with a prefilter approved for pesticides (MSHA/NIOSH approval number prefix TC-23C), or a canister approved for pesticides (MSHA/NIOSH approval number prefix TC-14G). For exposure outdoors, dust/mist filtering respirator (MSHA/NIOSH approval number prefix TC-21C).

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/maintaining PPE. IF no such instructions for washables, use detergent and hot water. Keep and wash PPE separately from other laundry.

**USER SHOULD:**

1. Wash hands before eating, drinking, chewing gum, using tobacco or using the toilet.
2. Remove clothing immediately if pesticide gets inside. Then wash body thoroughly and put on clean clothing.

## **SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES**

**PHYSICAL DESCRIPTION:** Off-white liquid

**ODOR:** Faint odor

**MOLECULAR WEIGHT (technical):** 233.1 for Diuron, 220.2 for Thidiazuron

**MOLECULAR FORMULA (technical):** C<sub>9</sub>H<sub>10</sub>Cl<sub>2</sub>N<sub>2</sub>O for Diuron, C<sub>9</sub>H<sub>8</sub>N<sub>4</sub>OS for Thidiazuron

**MELTING POINT:** Not available

**FREEZING POINT:** unknown

**SPECIFIC GRAVITY:** 1.07

**pH:** 5.0 - 6.0

**VAPOR PRESSURE:** Not available

**WATER SOLUBILITY:** dispersible

## **SECTION 10 - STABILITY AND REACTIVITY**

**STABILITY** (Conditions to Avoid): Stable under normal storage conditions.

**INCOMPATIBILITIES:** Strong alkalis.

**HAZARDOUS DECOMPOSITION:** Oxides of hydrogen, nitrogen, sulfur, and carbon.

**HAZARDOUS POLYMERIZATION:** Will not occur.

## **SECTION 11 - TOXICOLOGICAL INFORMATION**

### **ACUTE TOXICITY:**

Oral LD <sub>50</sub> (rat) female	- 2,403 mg/Kg
Dermal LD <sub>50</sub> (rat)	- > 5,000 mg/Kg
Inhalation LC <sub>50</sub> (rat)	- 2.08 mg/L
Eye Irritation (rabbit)	- Slightly irritating
Skin Irritation (rabbit)	- Slightly irritating
Sensitization (guinea pig)	- Not sensitizing

### **CARCINOGEN STATUS:**

OSHA - Not listed  
NTP - Not listed.  
IARC - Not listed.

**MUTAGENIC DATA:** In vitro and in vivo study results are negative.

**ADDITIONAL DATA:** Thidiazuron and Diuron studies for developmental and reproductive toxicity were negative. Studies for delayed neurotoxicity were positive.

## **SECTION 12 - ECOLOGICAL INFORMATION**

**ENVIRONMENTAL SUMMARY:** This product is toxic to fish. Do not apply directly to water, to areas where surface water is present or to intertidal areas below the mean high water mark. Do not apply where runoff is likely to occur. Do not apply when weather conditions favor drift from areas treated. Do not contaminate water when disposing of equipment washwaters. Apply this product only as labeled.

### **Toxicity for Thidiazuron Technical**

#### **FISH TOXICITY:** (Technical)

96 hour LC<sub>50</sub>, Rainbow trout - > 1000 mg/kg  
96 hour LC<sub>50</sub>, Bluegill - > 1000 mg/kg  
**AVIAN TOXICITY:** Mallard Duck LC50 (8d): > 5000 mg/kg  
**BEE TOXICITY:** Not toxic to bees

### **Toxicity for Diuron Technical**

#### **FISH TOXICITY:** (Technical)

96 hour LC<sub>50</sub>, Rainbow trout - 5.6 mg/kg  
96 hour LC<sub>50</sub>, Bluegill - 5.9 mg/kg  
**AVIAN TOXICITY:** Mallard Duck LC50 (8d): > 5000 mg/kg  
**BEE TOXICITY:** Not toxic to bees

## **SECTION 13 - DISPOSAL CONSIDERATIONS**

**PESTICIDE DISPOSAL:** Pesticide wastes are toxic. 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:** Refer to product label.

## **SECTION 14 - TRANSPORT INFORMATION**

**DOT SHIPPING DESCRIPTION:** Not Regulated for Transport

**DOT HAZARD CLASS:** N/A

**UN NUMBER:** N/A

**DOT PACKING GROUP:** N/A

DOT PRIMARY/SECONDARY LABEL: N/A  
DOT PRIMARY/SECONDARY PLACARD: N/A  
DOT EMERGENCY RESPONSE GUIDE #: N/A

#### **SECTION 15 - REGULATORY INFORMATION**

OSHA HAZARDOUS COMMUNICATION STATUS: Not regulated  
CERCLA REPORTABLE QUANTITY: Diuron 100 pounds (180 gallons of product)  
SARA TITLE III STATUS:  
302 Extremely Hazardous Substance - No  
311/312 Hazard Categories - Acute, chronic  
313 Toxic Chemicals - Diuron (CAS # 330-54-1)  
  
CALIFORNIA PROP 65 STATUS: - Listed  
  
US STATE RIGHT-TO-KNOW INGREDIENTS: - Diuron (CAS # 330-54-1)

#### **SECTION 16 - OTHER INFORMATION**

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