



# Material Safety Data Sheet

MSDS Number: 000000000077

## FINISH<sup>®</sup> 6 HARVEST AID FOR COTTON

MSDS Version 3.

### SECTION 1. CHEMICAL PRODUCT AND COMPANY INFORMATION

**Product Name** FINISH<sup>®</sup> 6 HARVEST AID FOR COTTON  
**Chemical Name**  
**Synonym** CYCLANILIDE & ETHEPHON  
**MSDS Number** 77  
**Chemical Family**  
**Chemical Formulation**  
**EPA Registration No.** 264-585  
**Canadian Registrat. No.**

Aventis CropScience USA LP  
2 T.W. Alexander Drive  
Research Triangle PK, NC 27709  
USA

For Product Use Information: (888)-AVENTIS (283-6847) Monday through Friday  
8:00AM-4:30PM  
For Medical Emergency contact DART: (800) 334-7577 24 Hours/Day  
For Transportation Emergency CHEMTREC: (800) 424-9300 24 Hours/Day

**Product Use Description** FIFRA regulated use only.

### SECTION 2. COMPOSITION/INFORMATION ON INGREDIENTS

<u>Component Name</u>	<u>CAS No.</u>	<u>Concentration % by Weight</u>	
		<u>Minimum</u>	<u>Maximum</u>
ETHEPHON ((2-CHLOROETHYL) PHOSPHONIC ACID)	16672-87-0	72.1000	
CYCLANILIDE (RPA 90946)	113136-77-9	6.5400	
1,2-Propylene glycol	57-55-6	1.5000	
ETHYLENEDIAMINE TETRAACETIC ACID	60-00-4	2.5700	
Other ingredients (Trade secret)			

### SECTION 3. HAZARDS IDENTIFICATION

*NOTE: Please refer to Section 11 for detailed toxicological information.*

**Emergency Overview** Danger! Corrosive - causes irreversible eye damage. Harmful if swallowed.  
Harmful if inhaled or absorbed through skin.

**Physical State** liquid opaque suspension

**Odor** odorless

**Appearance** brown

**Immediate Effects**

**Eye** Corrosive. Causes corneal opacity, irreversible eye damage. Vapors and mists

# Material Safety Data Sheet

MSDS Number: 000000000077

## FINISH® 6 HARVEST AID FOR COTTON

MSDS Version 3.

can cause irritation, redness, tearing.

<b>Skin</b>	May be harmful if absorbed through skin. May cause redness, swelling on prolonged contact.
<b>Ingestion</b>	Harmful if ingested. May cause irritation, abdominal pain, chest pain, burns to mouth and esophagus.
<b>Inhalation</b>	Harmful if inhaled. Mists may cause respiratory tract irritation, coughing, a burning sensation.
<b>Chronic or Delayed Long-Term</b>	This product does not contain any ingredients designated by IARC, NTP, ACGIH or OSHA as probable or suspected human carcinogens.
<b>Medical Conditions Aggravated by Exposure</b>	Inhalation of product may aggravate existing chronic respiratory problems such as asthma, emphysema or bronchitis. Skin contact may aggravate existing skin disease.

### SECTION 4. FIRST AID MEASURES

<b>Eye</b>	Hold eyelids open and flush with a steady, gentle stream of water for at least 15 minutes. Seek immediate medical attention, preferable with an ophthalmologist. If the physician is not immediately available, eye irrigation should be continued for an additional 15 minutes. If it is necessary to transport the patient to a physician and the eye needs to be bandaged, use a dry sterile cloth pad and cover both eyes.
<b>Skin</b>	In case of contact, wash with plenty of soap and water. Seek medical attention if irritation develops or persists.
<b>Ingestion</b>	If victim is conscious and alert, give 2-3 glasses of water. Do not induce vomiting. Material may enter lungs and cause severe damage. Do not give anything by mouth to an unconscious person. Seek immediate medical attention. Do not leave victim unattended. To prevent aspiration of swallowed product, lay victim on side with head lower than waist. Persons attending the victim should avoid direct contact with heavily contaminated clothing and vomitus. Wear impervious gloves while decontaminating skin and hair.
<b>Inhalation</b>	Remove victim from immediate source of exposure and assure that the victim is breathing. If breathing is difficult, administer oxygen, if available. If victim is not breathing, administer CPR (cardio-pulmonary resuscitation). Seek medical attention.
<b>Note to Physician</b>	All treatment should be based on observed signs and symptoms of distress in the patient. Consideration should be given to the possibility that overexposure to materials other than this product may have occurred.

Treat symptomatically. No specific antidote available.

This material is an acid. The primary toxicity of this product is due to its irritant effects on mucous membranes.

# Material Safety Data Sheet

MSDS Number: 00000000077

## FINISH® 6 HARVEST AID FOR COTTON

MSDS Version 3.

**INHALATION:** If cough or shortness of breath occurs, evaluate the possibility of bronchitis or pneumonitis. Chest x-ray and arterial blood gases can be used to determine the presence of pulmonary edema. In severe cases, use of humidified oxygen and assisted ventilation including positive end expiratory pressure (PEEP) may be needed. Parenteral steroids may be useful in limiting the extent of pulmonary damage.

**SKIN:** Wash exposed area thoroughly with soap and water. Chemical burns from strong acids are generally treated the same as thermal burns.

**EYES:** Irrigate eyes for 15 minutes with sterile saline. If irritation, pain, swelling, photophobia or lacrimation persist, examination by an ophthalmologist is recommended.

**INGESTION:** If not already performed by first aid personnel, irrigate mouth with large amounts of water and dilute the acid by having victim drink 4 to 8 ounces of water or milk. DO NOT induce vomiting. Use of gastric lavage is controversial. The advantage of removal of acid must be weighed against the risk of perforation or bleeding. If a large amount of acid (> 1 ml/kg body weight) has been recently ingested, cautious gastric lavage is generally advised if the patient is alert and there is little risk of convulsions. Consultation with a gastroenterologist and/or surgeon is advised. Serious complications such as perforation or stricture of the esophagus may occur requiring care by specialists. Laryngeal edema may develop requiring intubation or tracheostomy.

### SECTION 5. FIRE FIGHTING MEASURES

<b>Flash Point</b>	> 93 °C / > 199 °F Flammability Class: WILL BURN. Method Used: Pensky-Martens Closed Cup
<b>Lower Flammable Limit</b>	2.6 %(V)
<b>Upper Flammable Limit</b>	12.6 %(V)
<b>Fire and Explosion Hazards</b>	Product will burn under fire conditions.
<b>Suitable Extinguishing Media</b>	foam, water, carbon dioxide (CO <sub>2</sub> ), dry chemical
<b>Fire Fighting Instructions</b>	Firefighters should wear NIOSH/MSHA approved self-contained breathing apparatus and full protective clothing. Keep unnecessary people away, isolate hazard area and deny entry. Evacuate residents who are downwind of fire. Dike area to prevent runoff and contamination of water sources. Dispose of fire control water later. Persons who may have been exposed to contaminated smoke should be immediately examined by a physician and checked for symptoms of poisoning. The symptoms should not be mistaken for heat exhaustion or smoke inhalation.

# Material Safety Data Sheet

## FINISH<sup>®</sup> 6 HARVEST AID FOR COTTON

MSDS Number: 00000000077  
MSDS Version 3.

### SECTION 6. ACCIDENTAL RELEASE MEASURES

<b>General and Disposal</b>	<p>Evacuation Procedures and Safety: Wear appropriate gear for the situation. See Personal Protection information in Section 8.</p> <p>Cleanup and Disposal of Spill: Absorb with vermiculite or other inert absorbent. Shovel up into an appropriate closed container (see Section 7: Handling and Storage). Decontaminate tools and equipment following cleanup.</p>
<b>Land Spill or Leaks</b>	<p>Containment of Spill: Stop leak if it can be done without risk. Dike spill using absorbent or impervious materials such as earth, sand or clay.</p> <p>Environmental and Regulatory Reporting: If spilled on the ground, the affected area should be removed to a depth of one or two inches and placed in an appropriate container for disposal. Prevent material from entering public sewer system or any waterway. Spills may be reportable to the National Response Center (800-424-8802) and to state and/or local agencies.</p>

### SECTION 7. HANDLING AND STORAGE

<b>Handling Procedures</b>	<p>Do not breathe vapors and mists. Do not get on skin or in eyes. Do not ingest. Use handling, storage and disposal procedures that will prevent contamination of water, food or feed. Keep from freezing. If freezing occurs, thaw and remix before using.</p>
<b>Storing Procedures</b>	<p>Store in an area that is away from ignition sources.</p>
<b>Work/Hygienic Procedures</b>	<p>Personal hygiene is an important work practice exposure control measure and the following general measures should be taken when working with or handling this material:</p> <p>Do not store, use, and/or consume foods, beverages, tobacco products, or cosmetics in areas where this material is stored.</p> <p>Wash hands and face carefully before eating, drinking, using tobacco, applying cosmetics, or using the toilet.</p> <p>Wash exposed skin promptly to remove accidental splashes of contact with this material.</p>
<b>Min/Max Storage Temperatures</b>	<p>0 °C / 50 °C</p>

# Material Safety Data Sheet

MSDS Number: 000000000077

## FINISH<sup>®</sup> 6 HARVEST AID FOR COTTON

MSDS Version 3.

### SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

**Engineering Controls** Where engineering controls are indicated by use conditions of a potential for excessive exposure exists, the following traditional exposure control techniques may be used to effectively minimize employee exposures: local exhaust ventilation at the point of generation.

**Eye/Face Protection** Eye and face protection requirements will vary dependent upon work environment conditions and material handling practices. Appropriate ANSI Z87 approved equipment should be selected for the particular use intended for this material.

Eye contact should be prevented through use of chemical safety glasses with side shields or splash proof goggles. An emergency eye wash must be readily accessible to the work area. Face contact should be prevented through use of a face shield.

**Body Protection** Skin contact should be prevented through use of suitable protective clothing, gloves and footwear, selected with regard of use conditions and exposure potential. Consideration must be given both to durability as well as permeation resistance.

**Respiratory Protection** When respirators are required, select NIOSH/MSHA approved equipment based on actual or potential airborne concentrations and in accordance with the appropriate regulatory standards and/or industrial recommendations.

Under normal conditions, in the absence of other airborne contaminants, the following should provide protection from this material up to the conditions specified by the appropriate OSHA, WHMIS or ANSI standard(s): Air-purifying (half-mask/full-face) respirator with cartridge/canister approved for use against dusts, mists and fumes, pesticides.

Under conditions immediately dangerous to life or health, or emergency conditions with unknown concentrations, use a full-face positive pressure air-supplied respirator equipped with an emergency escape air supply unit or use a self-contained breathing apparatus unit.

**General Protection** These recommendations provide general guidance for handling this product. Because specific work environments and material handling practices vary, safety procedures should be developed for each intended application. While developing safe handling procedures, do not overlook the need to clean equipment and piping systems for maintenance and repairs. Waste resulting from these procedures should be handled in accordance with Section 13: Disposal Considerations.

Assistance with selection, use and maintenance of worker protection equipment is generally available from equipment manufacturers.

### Exposure Limits

1,2-Propylene glycol	57-55-6	WEEL	TWA	50 ppm
----------------------	---------	------	-----	--------

# Material Safety Data Sheet

MSDS Number: 000000000077

## FINISH® 6 HARVEST AID FOR COTTON

MSDS Version 3.

Form of Exposure	Total vapor and aerosol.	
WEEL TWA		10 mg/m3
Form of Exposure	Aerosol.	
ACGIH TWA		3 mg/m3
Form of Exposure	Respirable.	
US CA OEL TWA PEL		5 mg/m3
Form of Exposure	Respirable fraction.	
US CA OEL TWA PEL		10 mg/m3
Form of Exposure	Total dust.	
US CA OEL TWA PEL		5 mg/m3
Form of Exposure	Respirable fraction.	
US CA OEL TWA PEL		5 mg/m3
Form of Exposure	Respirable fraction.	
US CA OEL TWA PEL		10 mg/m3
Form of Exposure	Total dust.	
US CA OEL TWA PEL		10 mg/m3
Form of Exposure	Total dust.	
ACGIH TWA		10 mg/m3
Form of Exposure	Inhalable particulate.	

### SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

<b>Appearance</b>	brown
<b>Physical State</b>	liquid opaque suspension
<b>Odor</b>	odorless
<b>pH</b>	1.7 at 1 wt/wt%.
<b>Vapor Pressure</b>	Not available
<b>Vapor Density (air = 1)</b>	Not available
<b>Specific Gravity</b>	1.368 at 25 °C
<b>Density</b>	1.3636 g/ml at 25 °C
<b>Boiling Point</b>	Not available
<b>Melting/Freezing Point</b>	Not available
<b>Solubility (in water)</b>	dispersible
<b>Decomposition Temperature</b>	> 170 °C

# Material Safety Data Sheet

MSDS Number: 000000000077

## FINISH® 6 HARVEST AID FOR COTTON

MSDS Version 3.

**Viscosity** 500 cps  
22 °C

**Other Information** Physical and Chemical properties here represent typical properties of this product. Contact the business area using the Product Information phone number in Section 1 for its exact specifications.

### SECTION 10. STABILITY AND REACTIVITY

**Chemical Stability** This material is stable under normal handling and storage conditions described in Section 7.

**Conditions to Avoid** Heat, flames and sparks.

**Incompatibility** zinc  
iron  
copper  
bases  
aluminum  
tin

**Hazardous Products of Decomposition** Decomposition Type: thermal  
hydrogen chloride  
carbon oxides

**Hazardous Polymerization (Conditions to avoid)** not applicable

### SECTION 11. TOXICOLOGICAL INFORMATION

**Acute Oral Toxicity** Rat: LD50: 2,000 - 5,000 mg/kg

**Acute Dermal Toxicity** Rabbit: LD50: > 2,000 mg/kg

**Acute Inhalation Toxicity** Rat: LC50: > 2.51 mg/l 4 h  
Acute Respiratory Irritation:  
No test data found for product.

**Skin Irritation** Rabbit: Moderately irritating

**Eye Irritation** Rabbit: Severely irritating.

**Sensitization** Guinea pig: Non-sensitizing

**Assessment Carcinogenicity**

**ACGIH**  
None  
**NTP**

# Material Safety Data Sheet

## FINISH® 6 HARVEST AID FOR COTTON

MSDS Number: 00000000077  
MSDS Version 3.

None  
**IARC**  
None  
**OSHA**  
None

### SECTION 12. ECOLOGICAL INFORMATION

**Ecological Information** For ecotoxicological data call the product information phone number listed in Section 1.

**Environmental Fate** For chemical fate data call the product information phone number listed in Section 1.

### SECTION 13. DISPOSAL CONSIDERATIONS

**General Disposal Guidance** Chemical additions, processing or otherwise altering this material may make the waste management information presented in this MSDS incomplete, inaccurate or otherwise inappropriate. Please be advised that state and local requirements for waste disposal may be more restrictive or otherwise different from federal laws and regulations. Consult state and local regulations regarding the proper disposal of this material.

EPA Hazardous Waste - Yes

**RCRA Classification** Not Regulated under this Statute

### SECTION 14. TRANSPORT INFORMATION

Corrosive Liquid, Acidic, Organic, N.O.S. (Ethepon, Citric Acid), 8, UN3265, PG III, ERG No.153

### SECTION 15. REGULATORY INFORMATION

#### US Federal

**EPA Registration No.** 264-585

#### TSCA list

1,2-Propylene glycol 57-55-6

ETHYLENEDIAMINE TETRAACETIC ACID 60-00-4

#### TSCA 12b export notification

None

#### SARA Title III - section 302 - notification and information

None

#### SARA Title III - section 313 - toxic chemical release reporting

None

# Material Safety Data Sheet

MSDS Number: 000000000077  
MSDS Version 3.

## FINISH® 6 HARVEST AID FOR COTTON

### US States Regulatory

#### CA Prop65

This product does not contain any substances known to the State of California to cause cancer.

This product does not contain any substances known to the State of California to cause reproductive harm.

#### US State right-to-know ingredients

1,2-Propylene glycol	57-55-6	PA, RI
ETHYLENEDIAMINE TETRAACETIC ACID	60-00-4	CA, CT, IL, NJ, PA

### Canadian Regulations

#### Canadian Registrat. No.

#### Canadian Domestic Substance List

1,2-Propylene glycol	57-55-6
ETHYLENEDIAMINE TETRAACETIC ACID	60-00-4

### Environmental

#### CERCLA

ETHYLENEDIAMINE TETRAACETIC ACID	60-00-4	5,000 lbs
----------------------------------	---------	-----------

#### Clean Water Section 307 Priority Pollutants

None

#### Safe Drinking Water Act Maximum Contaminant Levels

None

### International Regulations

#### EU Classification

None

#### European Inventory of Existing Commercial Substances (EINECS)

ETHEPHON ((2-CHLOROETHYL) PHOSPHONIC ACID)	16672-87-0
1,2-Propylene glycol	57-55-6
ETHYLENEDIAMINE TETRAACETIC ACID	60-00-4

## SECTION 16. OTHER INFORMATION

	Health	Flammability	Reactivity	Others
HMIS	3	1	1	
NFPA	3	1	1	

Reason for Revisions: Updated Regulatory Information, Section 8 - Additional Exposure Limits.

Print Date: 04/29/2002

Supersedes MSDS, which is older than: 04/25/2002

This information is provided in good faith but without express or implied warranty. Buyer assumes all responsibility for safety and use not in accordance with label instructions. The product names are registered trademarks of Aventis.

# Material Safety Data Sheet

**FINISH<sup>®</sup> 6 HARVEST AID FOR COTTON**

MSDS Number: 000000000077  
MSDS Version 3.