



## FINISH® 6 PRO HARVEST AID FOR COTTON

Version 2 / USA  
102000025315

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Revision Date: 01/20/2014  
Print Date: 02/04/2015

### SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

#### Product identifier

Trade name	FINISH® 6 PRO HARVEST AID FOR COTTON
Product code (UVP)	80234651
SDS Number	102000025315
EPA Registration No.	264-703

#### Relevant identified uses of the substance or mixture and uses advised against

Use	Herbicide
Restrictions on use	See product label for restrictions.

#### Information on manufacturer

Bayer CropScience  
2 T.W. Alexander Drive  
Research Triangle PK, NC 27709  
United States

#### Emergency telephone no.

All Emergencies, 24hr/ 7 days 1-800-334-7577

**Product Information Telephone No.** 1-866-99BAYER (1-866-992-2937)

**SDS Information or Request** SDSINFO.BCS-NA@bayer.com

### SECTION 2: HAZARDS IDENTIFICATION

#### Classification in accordance with regulation HCS 29CFR §1910.1200

Serious eye damage : Category 1  
Acute toxicity (Inhalation): Category 4  
Flammable liquids : Category 4



**Signal word:** Danger

#### Hazard statements

Causes serious eye damage.  
Harmful if inhaled.  
Combustible liquid

#### Precautionary statements

Wear protective gloves and eye/face protection.  
Avoid breathing mist and spray.  
Use only outdoors or in a well-ventilated area.  
Keep away from open flames/hot surfaces. - No smoking.



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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 doctor/physician.  
IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.  
Call a POISON CENTER or doctor/ physician if you feel unwell.  
In case of fire: Use sand, dry chemical or alcohol-resistant foam for extinction.  
Store in a well-ventilated place. Keep cool.  
Dispose of contents/container in accordance with local regulation.

### Other hazards

No other hazards known.

## SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

Hazardous Component Name	CAS-No.	Average % by Weight
Ethephon	16672-87-0	52.60
Cyclanilide	113136-77-9	3.30
Citric acid	77-92-9	4.40

## SECTION 4: FIRST AID MEASURES

### Description of first aid measures

<b>General advice</b>	When possible, have the product container or label with you when calling a poison control center or doctor or going for treatment.
<b>Inhalation</b>	Move 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 physician or poison control center immediately.
<b>Skin contact</b>	Take off contaminated clothing and shoes immediately. Wash off immediately with plenty of water for at least 15 minutes. Call a physician or poison control center immediately.
<b>Eye contact</b>	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 physician or poison control center immediately.
<b>Ingestion</b>	Call a physician or poison control center immediately. Rinse out mouth and give water in small sips to drink. DO NOT induce vomiting unless directed to do so by a physician or poison control center. Never give anything by mouth to an unconscious person. Do not leave victim unattended.

### Most important symptoms and effects, both acute and delayed

**Symptoms** To date no symptoms are known.

**Indication of any immediate medical attention and special treatment needed**



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<b>Risks</b>	Consideration should be given to the possibility that overexposure to materials other than this product may have occurred.
<b>Treatment</b>	Appropriate supportive and symptomatic treatment as indicated by the patient's condition is recommended. There is no specific antidote.

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**SECTION 5: FIREFIGHTING MEASURES**

<b>Extinguishing media</b>	
<b>Suitable</b>	Foam, Water, Carbon dioxide (CO <sub>2</sub> ), Dry chemical
<b>Unsuitable</b>	None known.
<b>Special hazards arising from the substance or mixture</b>	Dangerous gases are evolved in the event of a fire.
<b>Advice for firefighters</b>	
<b>Special protective equipment for fire-fighters</b>	Firefighters should wear NIOSH approved self-contained breathing apparatus and full protective clothing.
<b>Further information</b>	Evacuate personnel to safe areas. Keep out of smoke. Fight fire from upwind position. Cool closed containers exposed to fire with water spray. Do not allow run-off from fire fighting to enter drains or water courses.
<b>Flash point</b>	> 86 °C
<b>Autoignition temperature</b>	no data available
<b>Lower explosion limit</b>	2.6 %(V)
<b>Upper explosion limit</b>	12.6 %(V)
<b>Explosivity</b>	not applicable

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### SECTION 6: ACCIDENTAL RELEASE MEASURES

#### Personal precautions, protective equipment and emergency procedures

**Precautions** Remove all sources of ignition. Keep unauthorized people away. Isolate hazard area. Avoid contact with spilled product or contaminated surfaces.

#### Methods and materials for containment and cleaning up

**Methods for cleaning up** Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust). Collect and transfer the product into a properly labelled and tightly closed container. Clean contaminated floors and objects thoroughly, observing environmental regulations.

**Additional advice** Use personal protective equipment. Do not allow to enter soil, waterways or waste water canal. Do not allow product to contact non-target plants.

### SECTION 7: HANDLING AND STORAGE

#### Precautions for safe handling

**Advice on safe handling** Maintain exposure levels below the exposure limit through the use of general and local exhaust ventilation. Handle and open container in a manner as to prevent spillage.

**Advice on protection against fire and explosion** Keep away from heat and sources of ignition.

**Hygiene measures** Wash hands thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco, using the toilet or applying cosmetics. Remove Personal Protective Equipment (PPE) immediately after handling this product. Before removing gloves clean them with soap and water. Remove soiled clothing immediately and clean thoroughly before using again. Wash thoroughly and put on clean clothing.

#### Conditions for safe storage, including any incompatibilities

**Requirements for storage areas and containers** Protect from freezing.

Store in a cool, dry place and in such a manner as to prevent cross contamination with other crop protection products, fertilizers, food, and feed. Store in original container and out of the reach of children, preferably in a locked storage area.

### SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

#### Control parameters

Components	CAS-No.	Control parameters	Update	Basis
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Ethephon	16672-87-0	1.4 mg/m3 (OES BCS)		OES BCS*
Cyclanilide	113136-77-9	0.21 mg/m3 (OES BCS)		OES BCS*
Citric acid	77-92-9	100 ug/m3 (ST ESL)	07 2011	TX ESL
Citric acid	77-92-9	10 ug/m3 (AN ESL)	07 2011	TX ESL
1,2-Propanediol (Aerosol.)	57-55-6	10 mg/m3 (TWA)	2010	WEEL
1,2-Propanediol	57-55-6	1000 ug/m3 (ST ESL)	03 2012	TX ESL
1,2-Propanediol	57-55-6	50 ug/m3 (ST ESL)	03 2012	TX ESL
1,2-Propanediol	57-55-6	100 ug/m3 (AN ESL)	03 2012	TX ESL
1,2-Propanediol	57-55-6	50 ppb (AN ESL)	03 2012	TX ESL
1,2-Propanediol	57-55-6	500 ppb (ST ESL)	03 2012	TX ESL
1,2-Propanediol	57-55-6	5 ug/m3 (AN ESL)	03 2012	TX ESL
Pyrogenic (fumed) amorphous silica (Particulate.)	112945-52-5	2 ug/m3 (AN ESL)	02 2013	TX ESL
Pyrogenic (fumed) amorphous silica (Particulate.)	112945-52-5	27 ug/m3 (ST ESL)	02 2013	TX ESL

\*OES BCS: Internal Bayer CropScience "Occupational Exposure Standard"

**Exposure controls**

**Personal protective equipment**

In normal use and handling conditions please refer to the label and/or leaflet. In all other cases the following recommendations would apply.

**Respiratory protection**

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.

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.

**Hand protection**

Chemical-resistant gloves made of waterproof material such as neoprene, butyl rubber, barrier laminate or nitrile rubber.

**Eye protection**

Tightly fitting safety goggles



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	or Face-shield
<b>Skin and body protection</b>	Consideration must be given both to durability as well as permeation resistance. Wear long-sleeved shirt and long pants and shoes plus socks.
<b>General protective measures</b>	Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables, use detergent and warm/tepid water. Keep and wash PPE separately from other laundry. Eye wash facility and safety shower should be available.

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**SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES**

<b>Appearance</b>	brown
<b>Physical State</b>	Liquid
<b>Odor</b>	characteristic
<b>Odour Threshold</b>	no data available
<b>pH</b>	1.7 (1 %) at 23 °C
<b>Vapor Pressure</b>	no data available
<b>Vapor Density (Air = 1)</b>	no data available
<b>Density</b>	ca. 1.39 g/cm <sup>3</sup> at 20 °C
<b>Evaporation rate</b>	no data available
<b>Boiling Point</b>	no data available
<b>Melting / Freezing Point</b>	no data available
<b>Water solubility</b>	dispersible
<b>Minimum Ignition Energy</b>	not applicable
<b>Decomposition temperature</b>	not applicable
<b>Partition coefficient: n-octanol/water</b>	no data available
<b>Viscosity</b>	450 - 900 mPa.s



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<b>Flash point</b>	> 86 °C
<b>Autoignition temperature</b>	no data available
<b>Lower explosion limit</b>	2.6 %(V)
<b>Upper explosion limit</b>	12.6 %(V)
<b>Explosivity</b>	not applicable

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**SECTION 10: STABILITY AND REACTIVITY**

**Reactivity**

<b>Thermal decomposition</b>	not applicable
<b>Chemical stability</b>	Stable under recommended storage conditions.
<b>Possibility of hazardous reactions</b>	No hazardous reactions when stored and handled according to prescribed instructions.
<b>Conditions to avoid</b>	Extremes of temperature and direct sunlight.
<b>Incompatible materials</b>	Tin, Zinc, Iron, Copper, Bases, Aluminium
<b>Hazardous decomposition products</b>	Hydrogen chloride (HCl) Carbon oxides

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**SECTION 11: TOXICOLOGICAL INFORMATION**

<b>Exposure routes</b>	Eye contact, Ingestion, Inhalation, Skin Absorption
<b>Immediate Effects</b>	
<b>Eye</b>	Corrosive - causes irreversible eye damage.
<b>Skin</b>	Causes skin irritation. Harmful if absorbed through skin.
<b>Ingestion</b>	Harmful if swallowed.
<b>Inhalation</b>	Harmful if inhaled.
<b>Information on toxicological effects</b>	
<b>Acute oral toxicity</b>	LD50 (male/female combined rat) > 2,000 - < 5,000 mg/kg



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**Acute inhalation toxicity** LC50 (rat) > 2.5 mg/l  
Exposure time: 4 h  
Determined in the form of liquid aerosol.

LC50 (rat) > 10 mg/l  
Exposure time: 1 h  
Determined in the form of liquid aerosol.  
Extrapolated from the 4 hr LC50.

**Acute dermal toxicity** LD50 (rabbit) > 2,000 mg/kg

**Skin irritation** Moderate skin irritation. (rabbit)

**Eye irritation** Corrosive - causes irreversible eye damage. (rabbit)

**Sensitisation** Non-sensitizing. (guinea pig)

**Assessment repeated dose toxicity**

Ethephon did not cause specific target organ toxicity in experimental animal studies.  
Cyclanilide did not cause specific target organ toxicity in experimental animal studies.

**Assessment Mutagenicity**

Ethephon was not mutagenic or genotoxic in a battery of in vitro and in vivo tests.  
Cyclanilide was not mutagenic or genotoxic based on the overall weight of evidence in a battery of in vitro and in vivo tests.

**Assessment Carcinogenicity**

Ethephon was not carcinogenic in lifetime feeding studies in rats and mice.  
Cyclanilide was not carcinogenic in lifetime feeding studies in rats and mice.

**ACGIH**

None.

**NTP**

None.

**IARC**

None.

**OSHA**

None.

**Assessment toxicity to reproduction**

Ethephon did not cause reproductive toxicity in a two-generation study in rats.  
Cyclanilide caused reproduction toxicity in a two-generation study in rats only at dose levels also toxic to the parent animals. The reproduction toxicity seen with Cyclanilide is related to parental toxicity.

**Assessment developmental toxicity**

Ethephon did not cause developmental toxicity in rats and rabbits.  
Cyclanilide caused developmental toxicity only at dose levels toxic to the dams.





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No indication of developmental toxicity in animal tests.

**Further information**

Acute toxicity studies have been bridged from a similar formulation(s).  
The non-acute information pertains to the active ingredient(s).

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**SECTION 12: ECOLOGICAL INFORMATION**

**Toxicity to fish**

LC50 (Rainbow trout (*Oncorhynchus mykiss*)) 720 mg/l  
Exposure time: 96 h  
The value mentioned relates to the active ingredient ethephon.

LC50 (*Oncorhynchus mykiss* (rainbow trout)) > 11 mg/l  
Exposure time: 96 h  
The value mentioned relates to the active ingredient cyclanilide.

**Toxicity to aquatic invertebrates**

EC50 (Water flea (*Daphnia magna*)) > 1,000 mg/l  
Exposure time: 48 h  
The value mentioned relates to the active ingredient ethephon.

EC50 (*Daphnia*) 5 mg/l  
Exposure time: 48 h  
The value mentioned relates to the active ingredient cyclanilide.

**Toxicity to aquatic plants**

EC50 (*Chlorella vulgaris* (Fresh water algae)) 32 mg/l  
Exposure time: 72 h  
The value mentioned relates to the active ingredient ethephon.

EC50 (*Pseudokirchneriella subcapitata*) 13 mg/l  
Exposure time: 72 h  
The value mentioned relates to the active ingredient ethephon.

EC50 (*Selenastrum capricornutum*) 1.7 mg/l  
Exposure time: 120 h  
The value mentioned relates to the active ingredient cyclanilide.

**Biodegradability**

Ethephon: not rapidly biodegradable

Cyclanilide: not rapidly biodegradable

**Koc**

Ethephon: Koc:2540

Cyclanilide: Koc:358

**Bioaccumulation**

Ethephon:  
Does not bioaccumulate.

Cyclanilide: Bioconcentration factor (BCF) 0.36  
Does not bioaccumulate.



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<b>Mobility in soil</b>	Ethephon: Slightly mobile in soils  Cyclanilide: Moderately mobile in soils
<b>Environmental precautions</b>	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 contaminate surface or ground water by cleaning equipment or disposal of wastes, including equipment wash water. Do not apply when weather conditions favor runoff or drift. Drift or runoff from treated areas may adversely affect non-target plants. Apply this product as specified on the label.

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### SECTION 13: DISPOSAL CONSIDERATIONS

#### Waste treatment methods

**Product** 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.

**Contaminated packaging** Triple rinse containers.  
Completely empty container into application equipment, then dispose of empty container in a sanitary landfill, by incineration or by other procedures approved by state/provincial and local authorities.  
If burned, stay out of smoke.  
Follow advice on product label and/or leaflet.  
Return large containers to supplier.

**RCRA Information** Characterization and proper disposal of this material as a special or hazardous waste is dependent upon Federal, State and local laws and are the user's responsibility. RCRA classification may apply.

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### SECTION 14: TRANSPORT INFORMATION

**49CFR**  
UN number 3265  
Class 8  
Packaging group III  
Proper shipping name CORROSIVE LIQUID, ACIDIC, ORGANIC, N.O.S.  
(ETHEPHON)

**IMDG**  
UN number 3265



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Class 8  
Packaging group III  
Marine pollutant YES  
Proper shipping name CORROSIVE LIQUID, ACIDIC, ORGANIC, N.O.S.  
(ETHEPHON SOLUTION)

**IATA**

UN number 3265  
Class 8  
Packaging group III  
Environm. Hazardous Mark NO  
Proper shipping name CORROSIVE LIQUID, ACIDIC, ORGANIC, N.O.S.  
(ETHEPHON SOLUTION )

This transportation information is not intended to convey all specific regulatory information relating to this product. It does not address regulatory variations due to package size or special transportation requirements.

Freight Classification: INHIBITORS, MODIFIERS OR REGULATORS, plant growth

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**SECTION 15: REGULATORY INFORMATION**

**EPA Registration No.** 264-703

**US Federal Regulations**

**TSCA list**

Citric acid 77-92-9

**US. Toxic Substances Control Act (TSCA) Section 12(b) Export Notification (40 CFR 707, Subpt D)**

None.

**SARA Title III - Section 302 - Notification and Information**

None.

**SARA Title III - Section 313 - Toxic Chemical Release Reporting**

None.

**US States Regulatory Reporting**

**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**

None.

**Canadian Regulations**

**Canadian Domestic Substance List**

Citric acid 77-92-9

**Environmental**

**CERCLA**

None.

**Clean Water Section 307 Priority Pollutants**



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None.

### Safe Drinking Water Act Maximum Contaminant Levels

None.

### International Regulations

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

Ethephon	16672-87-0
Citric acid	77-92-9

### EPA/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 required for safety data sheets, and for workplace labels of non-pesticide chemicals. Following is the hazard information required on the pesticide label:

**Signal word:** Danger!

**Hazard statements:** Corrosive - causes irreversible eye damage.  
Harmful if swallowed, inhaled or absorbed through the skin.  
Causes skin irritation.  
Do not get in eyes, on skin, or on clothing.  
Avoid inhalation of vapour or mist.

## SECTION 16: OTHER INFORMATION

NFPA 704 (National Fire Protection Association):

Health - 3      Flammability - 2      Instability - 1      Others - none

HMIS (Hazardous Materials Identification System, based on the Third Edition Ratings Guide)

Health - 3      Flammability - 2      Physical Hazard - 1      PPE -

0 = minimal hazard, 1 = slight hazard, 2 = moderate hazard, 3 = severe hazard, 4 = extreme hazard

Reason for Revision: Revised according to the current OSHA Hazard Communication Standard (29CFR1910.1200) The following sections have been revised: Section 3: Composition / Information on Ingredients. Section 8: Exposure Controls / Personal Protection. Section 14: Transport Information.

Revision Date: 01/20/2014

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