



PREP(TM) BRAND ETHEPHON FOR COTTON AND TOBACCO
MATERIAL SAFETY DATA SHEET Date Prepared: 08/25/00 Supersedes Date: 10/30/97

1. CHEMICAL PRODUCT AND COMPANY DESCRIPTION

AVENTIS CROP SCIENCE USA LP
2 T.W. Alexander Drive
Research Triangle Pk NC 27709

Emergency Phone Numbers:

Medical/Transport:
DART (800)334-7577 24 Hours/Day
CHEMTREC (800)424-9300 24 Hours/Day

For Product Information:

(888) AVENTIS 24 Hours/Day

Product Status:

FIFRA regulated use only.

EPA FIFRA Registration Number:

264-418

Chemical Name or Synonym:

ETHEPHON

Molecular Formula:

C₂H₆ClO₃P

2. COMPOSITION/INFORMATION ON INGREDIENTS

Component	CAS Reg Number	OSHA Hazard	Percentage
ETHEPHON	16672-87-0	Y	55.4
OTHER INGREDIENTS (TRADE SECRET)	*****	N	BALANCE

3. HAZARDS IDENTIFICATION

A. EMERGENCY OVERVIEW:

Physical Appearance and Odor:

colorless to pale yellow / liquid, odorless.

Warning Statements:

DANGER! CORROSIVE. CAUSES SKIN AND EYE DAMAGE. MAY BE FATAL IF ABSORBED THROUGH SKIN. HARMFUL IF INHALED OR SWALLOWED.

B. POTENTIAL HEALTH EFFECTS:

Acute Eye:

Corrosive. Causes burns, corneal opacity, Liquid or vapor can cause irritation.

Acute Skin:

Severe irritant. Causes redness, swelling.

Acute Inhalation:

Harmful if inhaled. Mists may cause upper respiratory tract irritation, coughing, sore throat.

Acute Ingestion:

Harmful if ingested. May cause burns to mouth and esophagus, chestpain, abdominal pain.

Chronic Effects:

This product does not contain any ingredient designated by IARC, NTP, ACGIH or OSHA as probable or suspected human carcinogens. Prolonged contact can cause chronic bronchitis.

4. FIRST AID MEASURES

FIRST AID MEASURES FOR ACCIDENTAL:

Eye Exposure:

Hold eyelids open and flush with a steady, gentle stream of water for at least 15 minutes. Seek immediate medical attention, preferably 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.

Skin Exposure:

In case of contact, immediately wash with plenty of soap and water for at least 15 minutes. Particular attention should be paid to hair, nose, ears and other areas not easily cleaned. Seek immediate medical attention. Remove contaminated clothing and shoes while washing. Clean contaminated clothing and shoes before re-use or discard if they cannot be thoroughly cleaned. Heavily contaminated shoes and clothing should be discarded in a manner which limits further exposure. Launder contaminated clothing separately.

Inhalation:

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.

Ingestion:

If victim is conscious and alert, give 1-2 glasses of water to drink. 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. Vomiting may occur spontaneously. If vomiting occurs and the victim is conscious, give water to further dilute the chemical.

MEDICAL CONDITIONS POSSIBLY AGGRAVATED BY EXPOSURE:

Inhalation of product may aggravate existing chronic respiratory problems such as asthma, emphysema or bronchitis. Skin contact may aggravate existing skin disease.

NOTES TO PHYSICIAN:

All treatments 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.

5. FIRE FIGHTING MEASURES

FIRE HAZARD DATA:

Flash Point:

Not Applicable

Extinguishing Media:

Not combustible. Use extinguishing method suitable for surrounding fire.

Special Fire Fighting Procedures:

Firefighters should wear NIOSH/MSHA approved self-contained breathing apparatus and full protective clothing. Dike area to prevent runoff and contamination of water sources. Dispose of fire control water later.

Unusual Fire and Explosion Hazards:

Under fire conditions, toxic, corrosive fumes are emitted.

Hazardous Decomposition Materials (Under Fire Conditions):

hydrogen chloride
oxides of carbon

6. ACCIDENTAL RELEASE MEASURES

Evacuation Procedures and Safety:

Wear appropriate protective gear for the situation. See Personal Protection information in Section 8.

Containment of Spill:

Dike spill using absorbent or impervious materials such as earth, sand or clay. Follow procedure described below under Cleanup and Disposal of Spill.

Cleanup and Disposal of Spill:

Pump any free liquid into an appropriate closed container (see Section 7: Handling and Storage). Collect washings for disposal. Decontaminate tools and equipment following cleanup.

Environmental and Regulatory Reporting:

Do not flush to drain. 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 waterways.

7. HANDLING AND STORAGE

Minimum/Maximum Storage Temperatures:

Not Available

Handling:

Do not get on skin or in eyes. Avoid breathing vapors and mists. Do not ingest.

Storage:

Store in an area that is away from food, feedstuffs, fertilizers and seed.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Introductory Remarks:

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 Guidelines:

No exposure limits were found for this product or any of its ingredients.

Engineering Controls:

Where engineering controls are indicated by use conditions or a potential for excessive exposure exists, the following traditional exposure control techniques may be used to effectively minimize employee exposures.

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 devices 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 cartridges/canister approved for use against 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.

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.

Face contact should be prevented through use of a face shield.

Skin Protection:

Skin contact must be prevented through the use of permeation resistant clothing, gloves and footwear, selected with regard for use conditions and exposure potential. An emergency shower must be readily accessible to the work area. Consideration must be given both to durability as well as permeation resistance.

Work Practice Controls:

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:

- (1) Do not store, use, and/or consume foods, beverages, tobacco products, or cosmetics in areas where this material is stored.
- (2) Wash hands and face carefully before eating, drinking, using tobacco, applying cosmetics, or using the toilet.
- (3) Wash exposed skin promptly to remove accidental splashes of contact with this material.

9. PHYSICAL AND CHEMICAL PROPERTIES

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.

Physical Appearance:

colorless to pale yellow / liquid.

Odor:

odorless.

pH:

1.69 at 1 wt/wt%.

Specific Gravity:

1.3045 at 25 C (77 F).

Water Solubility:

soluble

Melting Point Range:

Not Available

Freezing Point Range:

< -20 C (-4 F)

Boiling Point Range:

Not Available

Vapor Pressure:

Not Available

Vapor Density:

Not Available

Viscosity:

viscosity (centistokes) : 7 to 8 cs at 25 C (77 F).

Molecular Weight:

144.5

10. STABILITY AND REACTIVITY**Chemical Stability:**

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

Conditions To Be Avoided:

elevated temperatures
extreme humidity

Materials/Chemicals To Be Avoided:

aluminum
zinc
strong bases
strong oxidizing agents

Decomposition Temperature Range:

170 C (338 F)

The Following Hazardous Decomposition Products Might Be Expected:

Decomposition Type: thermal
hydrogen chloride
oxides of carbon

Hazardous Polymerization Will Not Occur.**Avoid The Following To Inhibit Hazardous Polymerization:**

not applicable

11. TOXICOLOGICAL INFORMATION**Acute Eye Irritation:****Toxicological Information and Interpretation**

eye - eye irritation, rabbit.

Corrosive.

Acute Skin Irritation:**Toxicological Information and Interpretation**

skin - skin irritation, rabbit.

Severely irritating.

Acute Dermal Toxicity:**Toxicological Information and Interpretation**

LD50 - lethal dose 50% of test species, 1740 mg/kg, rabbit.

Acute Respiratory Irritation:

No test data found for product.

Acute Inhalation Toxicity:**Toxicological Information and Interpretation**

LC50 - lethal concentration 50% of test species, > 4.99 mg/l/4 hr, rat.

Acute Oral Toxicity:

Toxicological Information and Interpretation

LD50 - lethal dose 50% of test species, 3270 mg/kg, rat.

Chronic Toxicity:

This product does not contain any substances that are considered by OSHA, NTP, IARC or ACGIH to be probable or suspected human carcinogens.

No additional test data found for product.

12. ECOLOGICAL INFORMATION

Ecotoxicological Information

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

Chemical Fate Information:

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

13. DISPOSAL CONSIDERATIONS

Waste Disposal Method:

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.

Container Handling and Disposal:

Consult state and local regulations regarding the proper disposal of container.

EPA Hazardous Waste - YES

14. TRANSPORTATION INFORMATION

For Transportation Regulatory Information call the Product Information phone number in Section 1.

15. REGULATION INFORMATION

FEDERAL REGULATIONS

TSCA Inventory Status:

This product is excluded from TSCA because it is solely for FIFRA regulated use.

SARA Title III Hazard Classes:

- Fire Hazard - NO
- Reactive Hazard - NO
- Release of Pressure - NO
- Acute Health Hazard - YES
- Chronic Health Hazard - NO

SARA Extremely Hazardous Substances (EHS)/CERCLA Hazardous Substances

Ingredient	CERCLA/SARA RQ	SARA EHS TPQ
UNLISTED HAZARDOUS WASTES - CHARACTERISTIC OF	100 lbs	
CORR		
OSIVITY		

STATE REGULATIONS:

This product does not contain any components that are regulated under California Proposition 65.

16. OTHER INFORMATION

National Fire Protection Association Hazard Ratings--NFPA(R):

3 Health Hazard Rating--Serious
1 Flammability Rating--Slight
1 Instability Rating--Slight

National Paint & Coating Hazardous Materials Identification

3 Health Hazard Rating--Serious
1 Flammability Rating--Slight
1 Reactivity Rating--Slight

Reason for Revisions:

Change Company Name & Address

Key Legend Information:

ACGIH - American Conference of Governmental Industrial Hygienists
OSHA - Occupational Safety and Health Administration
TLV - Threshold Limit Value
PEL - Permissible Exposure Limit
TWA - Time Weighted Average
STEL - Short Term Exposure Limit
NTP - National Toxicology Program
IARC - International Agency for Research on Cancer
ND - Not determined

Disclaimer:

The information herein is given in good faith but no warranty, expressed or implied, is made.