MATERIAL SAFETY DATA SHEET

EPTAM 20GR

MSDS No. US004676_01
Version: 1 Date issued: 05/29/98 Date printed: 06/01/98

Section 1 – CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Company : Zeneca Agricultural Products

1800 Concord Pike Wilmington DE 19850

Phone number : (302) 886-1000

Emergency phone : Medical: 800-327-8633 (1-800 FASTMED)

Chemtrec: 800-424-9300 Technical:302-886-3000

Name used on label : EPTAM 20GR Product use : Herbicide

A Registered Trade Mark of Zeneca Agricultural Products

Section 2 – COMPOSITION/INFORMATION ON INGREDIENTS

Identity CAS-no. Typical % Other information

EPTC (ISO)

759-94-4 20 %

Other Ingredients:

80 % Including Montmorillonite Clay

(CAS 1302-78-9) which contains crystalline silica as quartz (CAS

no. 14808-60-7)

Section 3 – HAZARDS IDENTIFICATION

Physical hazards:

None

Health hazards:

Irritant (eye), harmful (cholinesterase inhibitor).

Section 4 – FIRST AID MEASURES

GENERAL ADVICE:

Call Zeneca's 24 hour Emergency Information Network at 1-800-FASTMED (327-8633) If a known exposure occurs or is suspected, immediately start the recommended procedures below. Simultaneously contact a Poison Center, a physician or the nearest hospital.

Be sure to advise the person contacted that the product is a

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cholinesterase inhibitor. Inform the person contacted of the type and extent of exposure, describe the victim's symptoms, and follow the advice given.

IF IN EYES:

Immediately flush with plenty of water for at least 15 minutes. Irrigate with eyewash solution or clean water, holding the eyelids apart, for at least 15 minutes. Do not attempt to neutralize with chemical agents. Obtain immediate medical attention. Oils or ointments should not be used at this time. After initial flushing, remove any contact lenses and continue flushing for at least 15 minutes.

IF ON SKIN:

Wash material off the skin with plenty of soap and water. If redness, itching or a burning sensation develops, get medical attention.

IF SWALLOWED:

If victim is alert and not convulsing, rinse mouth out and give 200-300 ml (1 cup) of water to dilute material. Immediately contact Zeneca's Emergency Information Network at 1-800-F-A-S-T-M-E-D (327-8633). Vomiting should only be induced under the direction of a physician or a poison control center. If spontaneous vomiting occurs, have victim lean forward with head down to avoid breathing in of vomitus, rinse mouth and administer water. Never give anything by mouth to an unconscious person.

IF INHALED:

Remove victim to fresh air. If cough or other respiratory symptoms develop, consult medical personnel.

MEDICAL ADVICE:

If cholinesterase inhibition is suspected, atropine by injection is antidotal. Pralidoxime chloride (2-PAM) is NOT recommended as an antidote for this compound. Thiocarbamates have been shown in laboratory animals to cause a disulfiram (Antabuse)-type reaction in combination with alcohol.

Section 5 – FIRE FIGHTING MEASURES

Flash point :
 Not applicable.
Autoignition temperature :
 No data
Flammable limits (STP) :
 Not applicable.
EXTINGUISHING MEDIA:

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Vapors may be irritating to the respiratory tract and may cause breathing difficulty and pulmonary edema. Symptoms may be delayed sveral hours or longer depending on exposure. As in any fire, prevent human exposure to fire, smoke, fumes or products of combustion. Evacuate nonessential personnel from the fire area. Use standard firefighting techniques in extinguishing fires involving this product. High pressure water hose may spread product from broken containers increasing contamination hazards. Contaminated buildings, areas and equipment must not be used until they are properly decontaminated.

FIRE AND EXPLOSION HAZARDS:

This product is not considered flammable. However, under fire conditions, it may decompose to give off toxic materials.

PROTECTIVE EQUIPMENT:

A self contained breathing apparatus and full protective clothing should be worn in fire conditions.

Section 6 – ACCIDENTAL RELEASE MEASURES

PERSONAL PRECAUTIONS:

A small spill can be handled routinely. Use adequate ventilation and wear an air-supplied respirator to prevent inhalation. Wear suitable protective clothing and eye protection to prevent skin and eye contact.

METHODS FOR CLEANING UP:

Sweep up spilled material being careful not to create dust. Place sweepings in an open drum. Generously cover the contaminated areas with common, household detergent (e.g. TIDE, registered trademark of Proctor & Gamble Co.). Using a stiff brush and small amounts of water, work the detergent into the remaining spilled material forming a slurry. Brush the slurry into cracks and crevices and allow to stand for 2-3 minutes. Be careful to completely avoid skin or eye contact. Do not splatter on oneself or bystanders. Spread a suitable absorbent such as clay, sawdust or kitty litter on the slurry liquid. Sweep up and shovel into waste drums. Repeat if necessary. Rinse with small amount of water and use absorbent to collect the wash solution. Shovel into the open drum. Seal drum and dispose of contaminated material in a facility permitted for hazardous waste. Large spills should be handled according to a spill plan. Otherwise, in case of emergency call, day or night, 800-424-9300, Chemtrec.

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Section 7 – HANDLING AND STORAGE

ADDITIONAL INFORMATION:

Prevent skin and eye contact with this material. Avoid inhalation of spray mist. Showers at the end of the work day are desirable. Workers must follow good personal hygiene practices. Wash with soap and water immediately after use or contact. Do not eat, drink, or smoke in areas where the material is being used. Keep food and animal feed in separate area away from the storage/use location.

Do not store near feed, food, or within the reach of children.

Section 8 – EXPOSURE CONTROLS / PERSONAL PROTECTION

Occupational exposure limits

ACGIH TLV crystalline silica

as quartz

(Respirable Dust)

 0.1 mg/m^3

Occupational exposure standards

No ACGIH TLV or OSHA PEL assigned. Minimize exposure in accordance with good hygiene practice. The ACGIH TLV for crystalline silica as quartz is 0.1~mg/m3, respirable dust. The OSHA PEL for crystalline silica may be calculated using the formula found in 29 CFR 1910.1000 Table Z-3. Zeneca Inc. operates its facilities such that employee exposure to the active ingredient is limited to below 0.3~mg/m3.

ENGINEERING CONTROLS:

Ventilation:

Use ventilation adequate to maintain safe levels.

This product is intended for use outdoors where engineering controls are not necessary. If use conditions are different (e.g. product reformulation or repackaging), employee exposure should be minimized using traditional techniques such as enclosed system design and/or local exhaust ventilation.

EYE PROTECTION:

Eye contact with the material should be avoided through the use of chemical safety glasses, goggles or a faceshield, selected in regard to exposure potential.

BODY PROTECTION:

Skin contact should be prevented through the use of footwear, impervious gloves and long-sleeved clothing. Remove contaminated clothing and wash before rewearing.

RESPIRATORY PROTECTION:

If needed, use MSHA-NIOSH approved respirator for pesticides. GENERAL PERSONAL PROTECTION:

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An adequate supply of clean potable water should be available to allow thorough flushing of skin and eyes in event of contact with this compound.

Section 9 - PHYSICAL AND CHEMICAL PROPERTIES

Form : solid
Physical state : Granule
Color : Grey-tan

Loose bulk density : 41 .. 56 lb/cu ft

Section 10 – STABILITY AND REACTIVITY

HAZARDOUS REACTIONS (CONDITIONS TO AVOID)

Stable under normal conditions.

Hazardous polymerization: Will not occur. Combustion products: Toxic materials.

Section 11 - TOXICOLOGICAL INFORMATION

ACUTE TOXICITY (LETHAL DOSES)

LD50 Ingestion rat

Dose : 5000 mg/kg

Additional inform. : A single dose of this product is classified as

"practically nontoxic" by ingestion.

Eye contact rabbit

Additional inform. : This material was moderately irritating in rabbit eye

studies. A similar degree of irritation will probably

occur after human eye contact.

Dermal rabbit

Additional inform. : This material was nonirritating in rabbit dermal

irritation studies. No irritation is likely to develop

following contact with human skin.

LD50 Skin absorption rabbit

Dose : 5000 mg/kg

Additional inform. : This material is classified as "practically nontoxic"

by dermal absorption. A single dermal application of 5

g/kg did not produce signs of toxicity.

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Inhalation

Additional inform. : Since this product is a granular formulation,

significant inhalation exposure is unlikely to occur. Inhalation exposure to high concentrations may cause

effects related to cholinesterase inhibition.

ACUTE TOXICITY (IRRITATION, SENSITIZATION ETC.)

Eye Irritation human

Results : MILD IRRITANT

Skin Irritation rabbit

Results : MILD IRRITANT

Symptoms : Short contact periods are not expected to result in

irritation. Repeated or prolonged contact may result

in skin irritation.

GENERAL INFORMATION ABOUT ACUTE OR OTHER TOXICITIES Other effects of overexposure:

Laboratory tests in animals have shown that exposure to the active ingredient in this product, followed by ingestion of alcohol, may cause an adverse reaction, including low blood pressure, rapid heart beat, and flushing of the skin. Consumption of alcohol during and after exposure to this product should be avoided.

This product contains a small amount of crystalline silica as quartz. IARC has concluded that there is limited evidence of the carcinogenicity of crystalline silica to humans. Dust containing respirable crystalline silica, which is inhaled over a period of years, has been associated with the development of silicosis. Silicosis is a form of lung fibrosis which is progressive and can be disabling. Symptoms include shortness of breathe and nonspecific infections.

The active ingredient in this material has produced adverse effects on blood clotting in laboratory animal, but these effects were not seen in extensive studies of exposed workers. Signs of adverse effects of blood clotting include unusual bruising or a bleeding tendency.

The active ingredient in this material has caused nerve, muscel, and heart muscle changes in laboratory animals. Signs and symptons of nerve damage may include weakness, numbness and tingling sensations of the hands and feet, muscle cramps and loss of motor function.

General information

The active ingredient produces mild cholinesterase inhibition in experimental animals. Symptoms of cholinesterase inhibition may include salivation, sweating, headache, nausea, muscle twitching, tremors, incoordination, blurred vision, tears, abdominal cramps, diarrhea and chest discomfort. The following toxicity data refer to the EPTAM 20-G

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formulation.

Section 12 - ECOLOGICAL INFORMATION

ADDITIONAL INFORMAION ABOUT ECOLOGY
Toxic to fish.

Section 13 – DISPOSAL CONSIDERATIONS

Disposal method:

As of January 28, 1997 discarded product is not a hazardous waste under RCRA, 40 CFR 261.

Container disposal:

Completely empty bag into application equipment. Then dispose of empty bag in a sanitary landfill or by incineration, or by other procedures approved by state and local authorities.

Section 14 – TRANSPORT INFORMATION

ROAD TRANSPORT DOT

Not regulated by DOT.

Section 15 – REGULATORY INFORMATION

HAZARDOUS INGREDIENTS EPTC (ISO)

Other regulations, restrictions and prohibitions

TSCA (Toxic Substances Control Act) Regulations, 40CFR 710:

This product is a pesticide and is exempt from TSCA regulation.

CERCLA and SARA Regulations (40 CFR 355, 370, and 372):

Section 313 Supplier Notification. This product contains the following toxic chemicals subject to the reporting requirements of Section 313 of the Emergency Planning and Community Right-To-Know Act of 1986 and of 40 CFR 372: 96% EPTC (CAS 759-94-4)

EPA Registration No.: 10182-199

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Section 16 - OTHER INFORMATION

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