

ZENECA Ag Products Inc

MATERIAL SAFETY DATA SHEET

ORDRAM 15 GM

Version: 5

Date issued: 10/23/00

MSDS No. US006059_01

Date printed: 11/03/00

Section 1 – CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Company : Zeneca Ag Products Inc
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 : ORDRAM 15 GM

Product use : Herbicide

A Registered Trade Mark of Zeneca Agricultural Products

Section 2 – COMPOSITION/INFORMATION ON INGREDIENTS

Identity CAS-no.	Typical %	Other information
MOLINATE TECHNICAL 2212-67-1	15 %	
Other Ingredients	85 %	Including Montmorillonite Clay (CAS 1302-78-9) which contains crystalline silica as quartz (CAS no. 14808-60-7)

Ingredients not precisely identified are proprietary or non hazardous.
Values are not product specifications.

Section 3 – HAZARDS IDENTIFICATION

Physical hazards:
None

Health hazards:
Irritating to eyes. Cholinesterase inhibitor, inhalation(TLV)

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Section 4 – FIRST AID MEASURES

GENERAL ADVICE:

If a known exposure occurs or is suspected, immediately start the recommended procedures below. Call Zeneca's 24 hour Emergency Information Network at 1-800-FASTMED (327-8633) Be sure to advise the person contacted that this product may be a mild 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. After initial flushing, remove any contact lenses and continue flushing for at least 15 minutes. If redness, itching or a burning sensation develops, have eyes examined and treated by medical personnel.

IF ON SKIN:

Wash skin immediately with water, followed by soap and water. If redness, itching or a burning sensation develops, get medical attention.

IF SWALLOWED:

Provided the patient is conscious, wash out mouth with water. 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. TRANSFER TO HOSPITAL IMMEDIATELY.

IF INHALED:

Remove victim to fresh air. Apply artificial respiration if breathing has ceased or shows signs of failing. Oxygen may be beneficial if breathing is laboured or patient is cyanotic. Obtain medical attention.

POSSIBLE SYMPTOMS:

The active ingredient produced cholinesterase inhibition in experimental animals. Symptoms of cholinesterase inhibition include salivation, sweating, headache, nausea, muscle twitching, tremors, incoordination, blurred vision, small pupils, tears, abdominal cramps, diarrhea, and chest discomfort.

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. Continued absorption of the poison may occur resulting in total relapse after initial improvement. Very close supervision of the

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patient is indicated for at least 48-72 hours. Thiocarbamates have been shown in laboratory animals to cause a disulfiram (Antabuse)-type reaction in combination with alcohol. Symptoms include low blood pressure, rapid heart beat, and flushing of the skin. Consumption of alcohol during and after exposure of this product should be avoided.

Section 5 – FIRE FIGHTING MEASURES

Flash point :

Not applicable.

Autoignition temperature :

No data.

Flammable limits (STP): :

Not applicable.

EXTINGUISHING MEDIA:

Use standard firefighting techniques in extinguishing fires involving this product. Use water spray, dry chemicals, foam or carbon dioxide. 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. It will support combustion and decomposes under fire conditions to give off toxic materials. This product may form explosive dust clouds in air.

PROTECTIVE EQUIPMENT:

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

Section 6 – ACCIDENTAL RELEASE MEASURES

PERSONAL PRECAUTIONS:

Make sure all personnel involved in the spill cleanup follow good industrial hygiene practices. A small spill can be handled routinely. For large spills: Ensure suitable personal protection (including respiratory protection) during removal of spillages. Wear suitable protective clothing and eye protection to prevent skin and eye contact.

ENVIRONMENTAL PRECAUTIONS:

Washings must be prevented from entering surface water drains.

METHODS FOR CLEANING UP:

Sweep up and shovel into waste drums. Avoid dust generation. 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

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allow to stand for 2-3 minutes. Be careful to completely avoid skin or eye contact. Do not splatter on oneself or bystanders. Spread absorbent on the slurry liquid and shovel mixture into the open drum. Repeat if necessary. 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.

Section 7 – HANDLING AND STORAGE

SAFE HANDLING ADVICE:

Wash face and hands before eating, drinking or smoking.

ADDITIONAL INFORMATION:

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.

Follow procedures specified in the National Fire Protection Association Codes and Standards for handling combustible dusts. Do not store near feed, food, or within the reach of children. Containers should be stored in a cool, dry, well-ventilated area. Store away from flammable materials and sources of heat and flame. Exercise due caution to prevent damage to or leakage from the container. Prevent skin and eye contact with this material.

MATERIALS NOT TO BE STORED TOGETHER:

Keep food and animal feed in separate area away from the storage/use area. Store away from flammable materials and sources of heat and flame. Do not store near seeds or fertilizer.

Section 8 – EXPOSURE CONTROLS / PERSONAL PROTECTION

Occupational exposure limits

ZENECA Standard on: MOLINATE TECHNICAL

8 hr TWA 0.4 mg/m³

ACGIH TLV crystalline silica

as quartz

(Respirable Dust)

0.1 mg/m³

Not applicable to field use.

ENGINEERING CONTROLS:

This product is intended for use outdoors where engineering controls are not necessary. If use conditions are different (e.g. product reformulation or repackaging), use ventilation adequate to maintain safe levels.

EYE PROTECTION:

Eye contact with the material should be avoided through the use of

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chemical safety glasses, goggles or a faceshield, selected in regard to exposure potential.

BODY PROTECTION:

This product is FIFRA regulated. Refer to product labeling for end-user Personal Protection requirements. Skin contact should be prevented through the use of footwear, impervious gloves and long-sleeved clothing. Remove contaminated clothing and wash before rewearing. Wash separately from other laundry. Workers should shower at the end of each shift.

RESPIRATORY PROTECTION:

Use MSHA-NIOSH approved respirator for pesticides.

GENERAL PERSONAL PROTECTION:

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	: beige to grey
Bulk density	: 60 lb/cu ft
Solubility	: No data.
pH-value (quant.)	:
	No data.

Section 10 – STABILITY AND REACTIVITY

HAZARDOUS REACTIONS (CONDITIONS TO AVOID)

Stable under normal conditions.

Incompatibility:

The product is relatively nonreactive. It will not react with water. The product is not corrosive to materials commonly used in the construction of process equipment, storage and shipping containers.

Hazardous decomposition products: Combustion products: Toxic materials.

Hazardous polymerization: Will not occur.

Section 11 – TOXICOLOGICAL INFORMATION

ACUTE TOXICITY (LETHAL DOSES)

LD50 Oral male rats

: 4100 mg/kg

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LD50 Oral female rats

: 4198 mg/kg

LD50 Dermal rabbit

: > 2000 mg/kg

LC50 Inhalation male rats

: 2.91 mg/l

Additional inform. : Based on a similar formulation. Inhalation of high concentration of this material may lead to effects related to cholinesterase inhibition.

Inform. applies to : MOLINATE TECHNICAL

LC50 Inhalation female rats

: 1.39 mg/l

Period : 4 hours

Additional inform. : Based on a similar formulation. Inhalation of high concentration of this material may lead to effects related to cholinesterase inhibition.

Inform. applies to : MOLINATE TECHNICAL

ACUTE TOXICITY (IRRITATION, SENSITIZATION ETC.)

Eye Irritation Eye contact rabbit

Results : SEVERE IRRITANT

Additional inform. : A similar degree of irritation will probably occur after human eye contact.

Skin Irritation rabbit

Results : NON-IRRITANT

Additional inform. : Irritation will probably not develop following contact with human skin.

GENERAL INFORMATION ABOUT ACUTE OR OTHER TOXICITIES

Other effects of overexposure:

Short-term repeated exposure in rats (4-45 mg/kg/day) resulted in decreased weight gain and decreased fertility in male rats. The anti-fertility effects were seen in male rats only and were reversible after a 14-day exposure. The effects on sperm are considered to be rodent-specific and are not expected in man. An extensive study of molinate workers showed that exposure to the material produced no effects on fertility or sperm counts in humans. Reduced litter size and decreased neonatal body weights were observed in the rat reproduction studies; no teratogenic effects (birth defects) nor effects on postnatal survival were observed. There were no teratogenic effects in mice.

High doses (60-180 mg/kg/day) of the technical material were fed to rats

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and dogs for 90 days. Effects were noted in the kidneys, testes and ovaries.

In a two-year feeding study, male rats receiving 300 ppm a day showed an increased incidence of kidney tumors. This effect was not seen in female rats or in male or female mice at any dose level.

High doses of molinate fed to hens produced moderate nerve damage (which was fully reversible).

Molinate was not mutagenic except in one mutagenicity assay.

There are no data available which addresses medical conditions that are generally recognized as being aggravated by exposure to this product. No other adverse clinical effects have been associated with exposure to this material.

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.

Section 12 – ECOLOGICAL INFORMATION

ECOTOXICITY

Additional inform. : Very toxic to fish.

Section 13 – DISPOSAL CONSIDERATIONS

As of January 28, 1997 discarded product is not a hazardous waste under RCRA, 40 CFR 261. This material is extremely toxic to fish. Untreated effluent should not be discharged where it will drain into lakes, streams, or ponds.

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.

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Section 14 – TRANSPORT INFORMATION

ROAD TRANSPORT DOT

Not regulated by DOT.

Section 15 – REGULATORY INFORMATION

HAZARDOUS INGREDIENTS

MOLINATE TECHNICAL

Other Ingredients

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: Molinate - CAS 2212-67-1, 15%

EPA

EPA Registration no.: 10182-420

Section 16 – OTHER INFORMATION

ZENECA Ag Products Inc believes that the information and recommendations contained herein (including data and statements) are accurate as of the date thereof. NO WARRANTY OF FITNESS FOR ANY PARTICULAR PURPOSE, WARRANTY OF MERCHANTABILITY, OR ANY OTHER WARRANTY, EXPRESS OR IMPLIED, IS MADE CONCERNING THE INFORMATION PROVIDED HEREIN. The information provided herein relates to the specific product designated and may not be valid where such product is used in combination with any other materials or in any process. Further, since the conditions and methods of use of the product and of the information referred to herein are beyond the control of ZENECA Ag Products Inc, ZENECA Ag Products Inc expressly disclaims any and all liability as to any results obtained or arising from any use of the product or reliance on such information.

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