

# SERAFUME\* GRAIN FUMIGANT

CONTROLS INSECT PESTS IN FARM STORAGE AND COUNTRY ELEVATORS

Chloride 76.5%; Carbon Bisulfide 0.0%  
Sulfur Dioxide 10.0%; Ethylene Dibromide 3.5%  
-AA

100%

## APPLICATION and SAFETY PRECAUTIONS

Application of grain fumigants depends upon several details. 1 All grain bins should be sealed. Before applying the fumigant, seal the structure as completely as possible below the surface of the grain. 2 Have the grain surface completely covered below the top of the bin sides. 3 Apply the fumigant to the building if at all possible. During actual application, have a person to help in case of accident. Have him stand outside where he can see into the building. If it is necessary to enter a large bin for application of the fumigant, wear a suitable gas mask, such as a full-face respirator with a FRESH black canister which should be replaced frequently. 4 Apply the fumigant uniformly with a hand or power sprayer. Replace the nozzle at the end to deliver a broad, coarse stream of the grain for at least three days, and preferably for a week. 5 Do not fumigate often or at higher dosages than recommended. Results are obtained during cool, calm periods of the day. High winds and strong winds increase vaporization and loss of the fumigant.

Temperature of the grain itself is important, rather than the temperature of the air. It is not advisable to fumigate grains other than rice when the temperature is below 60° F. Even with rice, it is better to fumigate when the temperature is above 60° F, since at lower temperatures the insects are more active and the fumigant is less effective because of its reduced volatility. Determine grain temperature. Consult your dealer for more information.

Use a grain bin insecticide to treat the inside of the bin before fumigation. Do not use on non-crop lands away from water supplies. Containers should be sealed with holes in them and burying with wastes.

## DIRECTIONS

Farm-stored grain with SERAFUME within six weeks after harvest. If grain is held into a second season, re-treatment may be necessary. In warm weather following winter storage, for a single bin, the fumigant may be applied by the headroom in the bin, but if this requires more than 5 minutes, the bin is treated on the same day, wear a gas mask. Avoid contact with fumigant vapors.

NOTE: Fumigate grain with SERAFUME when it is being stored. The fumigant may be pumped or poured over the grain.

between drafts, which should not exceed 15-foot depths in the bin. Give double dosages to top and bottom drafts. Under conditions of long storage or intense insect attack, retreatment may be necessary. Need for it may be determined by observation of live insects or by overheating of grain because of insect activity.

**BULK CERTIFIED OR HYBRID SEED GRAIN:** Bulk seed grain may be fumigated by strict adherence to dosage recommendations, and by observing the following precautions to avoid damage and loss of seed viability: (1) The moisture content of the seed must be less than 12% and preferably less than 10%. (2) The seed temperature during exposure period should be between 65° F. and 85° F. (3) The fumigant exposure period should not be more than 24 hours, and provision must be made to remove the fumigant by aeration immediately after the 24 hour exposure. This may be accomplished in tight structures by the use of aeration fans, and in loosely constructed storages by breaking all seals applied when preparing for fumigation. Do not fumigate low viability seed, as germination may be further reduced. See SAFETY PRECAUTIONS.

## RECOMMENDED DOSAGES

Grain Temperature 60 F. or Higher	Types of Storage	Gallons per 1000 Bushels*		
		Wheat, Rye, Barley	Corn, Oats	Grain Sorghums
Farm Storage	Wooden Bins	4	6	8
	Steel Bins	3	5	6
Country Elevator Storage	Wooden Cribbed Bins	4	6	8
	Steel and Concrete Bins	3	4	6
Country Elevators	Average Conditions and Loads	Gallons per Box Car		
		5	8	12

\* Note: For lots of 500 to 1000 bushels, use the same dosage as recommended for 1000 bushels. With smaller lots, use the entire surface with fumigant.

**RICE:** For farm-stored rice, use 4 gallons of SERAFUME per 1000 bushels if average grain temperature is 75° F. or above. If temperature is between 60° F. and 75° F., use 6 gallons per 1000 bushels. If necessary to fumigate when grain temperature is below 60° F., use 8 gallons per 1000 bushels. For rice stored in large elevators, reduce dosage by about one-third. See SAFETY PRECAUTIONS.

**NOTICE:** Seller warrants that the product conforms to its chemical description and is reasonably fit for the purposes stated on the label when used in accordance with directions under normal conditions of use, but neither this warranty nor any other warranty of MERCHANTABILITY or FITNESS FOR A PARTICULAR PURPOSE, express or implied, extends to the use of this product contrary to label instructions, or under abnormal conditions, or under conditions not reasonably foreseeable to seller, and buyer assumes the risk of any such use.

SEE YOUR LOCAL AGRICULTURAL EXPERIMENT STATION OR EXTENSION SERVICE SPECIALISTS FOR GENERAL INFORMATION.

**Note:** Do not use containers or handling equipment of aluminum, magnesium, or their alloys, as under certain conditions SERAFUME may be severely corrosive to such metals.

**SPECIMEN LABEL**

## AGRICULTURAL CHEMICAL

Do Not Ship or Store with Food, Feeds, or Clothing

PRECAUCION AL USUARIO: Si usted no lee Inglés, no use este producto hasta que la etiqueta le haya sido explicada ampliamente.

TRANSLATION: (TO THE USER: If you cannot read English, do not use this product until the label has been fully explained to you.)

## DANGER POISON

KEEP OUT OF REACH OF CHILDREN  
HAZARDOUS VAPOR AND LIQUID  
MAY BE FATAL IF INHALED OR SWALLOWED  
CAUSES SKIN IRRITATION AND BLISTERS ON CONTACT  
MAY CAUSE EYE IRRITATION

Use Only with Adequate Ventilation • Do Not Breathe Vapor  
Do Not Take Internally • Avoid Contact with Eyes, Skin and Clothing  
When Necessary, Use Gas Mask Suitable for Organic Vapors

In case of skin contact, wash with soap and water. For eyes, flush with plenty of water for at least 15 minutes and get medical attention. Remove and wash clothing before re-use. Do not wear shoes until free of all chemical odor.

If illness results from inhalation, remove to fresh air and call a physician immediately. If swallowed, call a physician immediately. Induce vomiting by giving an emetic such as 2 tablespoonfuls of salt in a glass of warm water.

Do not use fumigated material or feed it to livestock until aeration has eliminated the odor of the fumigant.

To prevent thermal decomposition, avoid contact with flame or hot surfaces. Thermal decomposition may form highly poisonous phosgene gas.

CLASSIFIED BY UNDERWRITERS LABORATORIES, INC. AS TO FIRE HAZARD ONLY SERAFUME CLASSED 1 TO 5 LESS HAZARDOUS THAN PARAFFIN OIL IN RESPECT TO FIRE HAZARD.

SEE UL INDEX OF CLASSIFIED PRODUCTS 993P

STORE IN A TIGHTLY CLOSED CONTAINER IN A COOL LOCATION  
AWAY FROM DWELLINGS • KEEP FUMIGANT PROPERLY LABELED

B774

## THE DOW CHEMICAL COMPANY

AND SUBSIDIARIES

MIDLAND, MICHIGAN 48640, USA ZURICH, SWITZERLAND HONG KONG, BCC  
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\* Trademark of THE DOW CHEMICAL COMPANY

IN U.S.A. IN SEPTEMBER, 1974

LABEL 86-1120 PRINTED IN APRIL, 1973.

: (1) UL CONTROL NUMBER ADDED (2) AGRI-  
AL STATEMENT ADDED.

