MATERIAL SAFETY DATA SHEET

SOSTRAM® Corporation
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Roswell, GA 30076

In Case of Emergency, Call
SOSTRAM® Corporation: 770-587-1032
CHEMTREC: 800-424-9300

GENERAL INFORMATION

1-Slight Health Hazard 0-Noncombustible 0-Nonreactive
Above: Ratings based on NIOSH "Identification System for Occupationally Hazardous Materials" (1974).

TRANSPORTATION INFORMATION

This product is regulated for transportation purposes as follows:

MODE	*BULK (> 119 GALLONS)*	*NON-BULK (< 119 GALLONS)*
IMO (Water):	Yes	Yes
DOT (Land):	Yes	No

Proper Shipping Name: Environmentally hazardous substance, liquid, N.O.S. (chlorothalonil), 9, UN3082, PG III, ERG # 171
Special Provisions: Marine pollutant
Freight class: NMFC Item #102100

SARA TITLE III INFORMATION
313 Inventory Ingredients: Chlorothalonil (40.4% wt/wt)
312 Hazards Classification: Acute and Chronic Health (See Section V for Health Hazard Information)

I. PRODUCT IDENTIFICATION

Product Names: MOLD-RAM Fungicide
Synonyms (active ingredient): Tetrachloroisophthalonitrile, Chlorothalonil, $C_8C_{14}N_2$

II. HAZARDOUS INGREDIENTS

The substances listed below are those identified as hazardous chemicals under the criteria of the OSHA Hazard Communication Standard (29 CFR 1910.1200).

Component	CAS No.
Tetrachloroisophthalonitrile	1897-45-6

Exposure Limits for MOLD-RAM:

ACGIH-TLV: Not Established

OSHA-PEL: Not Established

III. PHYSICAL DATA (*denotes data developed from technical active ingredient)

Boiling Point (760 mm Hg):	100°C (lowest boiling component)
Melting Point:	Not Applicable
Freezing Point:	-5°C
Specific Gravity (H_20=1):	1.24
Vapor Pressure:	*5.72×10^{-7} torr @ 25°C
Vapor Density (Air = 1):	Not Determined
Solubility in H_20, % by Wt.:	*0.6 - 0.9 ppm. Formulation: dispersible in water
% Volatiles by Weight.:	2.14 (26.3 g/L by ASTM D 3960)
Evaporation Rate (Butyl Acetate = 1):	Not Determined
Appearance and Odor:	Liquid, light gray, slight odor
Density at 20°C:	10.3 lb/gal (1230.3 g/L)

pH:	6 to 8

IV. FIRE AND EXPLOSION DATA

Flash Point:	Nonflammable
Autoignition Temperature:	Not Applicable
Flammable Limits in Air, % by Volume:	Noncombustible
Lower:	Not Applicable
Upper:	Not Applicable
Extinguishing Media:	Carbon dioxide, foam, dry chemical or water.
Special Fire Fighting Procedures:	Self-contained breathing apparatus should be provided for firefighters.
Unusual Fire and Explosion Hazards:	May decompose under fire conditions emitting toxic and irritant gases (i.e. hydrogen chloride) to the respiratory tract.

V. HEALTH HAZARD INFORMATION

Oral LD_{50} (rat):	4,100 mg/kg; Category III[1]
Dermal LD_{50} (rabbit):	>2,000 mg/kg; Category III
Inhalation (4-hour) LC_{50} (rat):	0.13 mg/liter of air; Category II[2]
Primary Dermal Irritation Index (rabbit):	Mild dermal irritant; Category IV
Primary Eye Irritation (rabbit)	Moderate irritation, clearing by 7 days; Category III
Dermal Sensitization (guinea pig):	Non-sensitizer

Emergency and First Aid Procedures

IF INHALED: Move person 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 poison control center or doctor for further treatment advice.

IF IN EYES: 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 poison control center or doctor for treatment advice.

IF ON SKIN OR CLOTHING: Take off contaminated clothing. Rinse skin immediately with plenty of water for 15-20 minutes. Call a poison control center or doctor for treatment advice.

IF SWALLOWED: Call a poison control center or doctor immediately for treatment advice. Have affected person sip a glass of water if able to swallow. Do not induce vomiting unless told by a poison control center or doctor. Do not give anything by mouth to an unconscious person.

Have the product container or label with you when calling a poison control center or doctor or going for treatment.

NOTES TO PHYSICIAN: Probable mucosal damage may contraindicate the use of gastric lavage. Persons having a temporary allergic reaction respond to treatment with antihistamines or steroid creams and/or systemic steroids.

Effects of Chronic Overexposure

Repeated excessive dermal exposure may cause marked skin irritation and may increase the possibility of allergic reactions. Studies on rats and mice have suggested that technical chlorothalonil, when fed at high levels in the diet, may have oncogenic potential to these laboratory animals. However, neither chlorothalonil nor its metabolites interact with DNA and thus are not mutagenic. Tumor formation has been related to a non-

[1] Roman numerals refer to EPA pesticide toxicity categories. Further information is available in the Code of Federal Regulations (40 CFR 156.10).

[2] For transportation purposes, refer to 49 CFR 173.132 (b) (3);

genotoxic mechanism of action from which threshold levels have been established on rats and mice. Comprehensive dietary and worker exposure studies have shown exposure levels for humans to be well below these threshold levels - in addition, surveillance of chlorothalonil plant workers for many years has not demonstrated any increase in oncogenic potential to humans.

VI. REACTIVITY DATA

Conditions Contributing to Instability: Under normal use conditions, this product is stable.

Incompatibility: Not known.

Hazardous Decomposition Products: May decompose under fire conditions emitting gases and vapors (i.e. hydrogen chloride) which may be toxic and irritating to the respiratory tract.

Conditions Contributing To Hazardous Polymerization: Material not known to polymerize.

VII. SPILL OR LEAK PROCEDURES

Steps To Be Taken If Material Is Released Or Spilled:
This product is toxic to fish. Keep out of lakes, streams or ponds. Contain spills. Remove as much as possible by shoveling and sweeping. Place contaminated materials in closed, labeled containers and store in a safe place to await proper disposal. Do not contaminate water while cleaning equipment or disposing of wastes. Persons performing this work should wear adequate personal protective equipment and clothing.

Waste Disposal Method:
Waste portions of this product and contaminated absorbent materials may be disposed of by incineration provided the following conditions are observed:
Incinerate in a suitable oven fed by a mixture of air and methane, at 1100-1200° C temperature;
The HCl which may form in the incinerator exhaust gas must be conveyed into an aqueous absorption system containing 18-20% of $Ca(OH)_2$.

VIII. INDUSTRIAL HYGIENE CONTROL MEASURES

Ventilation Requirements

Good industrial hygiene practice dictates that indoor work areas be isolated and provided with adequate local exhaust ventilation. Work upwind in out-of-doors batch operations.

SPECIFIC PERSONAL PROTECTIVE EQUIPMENT

RESPIRATORY:	NIOSH - approved dust respirators or pesticide respirators
EYE:	Chemical goggles or face shields.
GLOVES:	Wear protective chemical-resistant gloves to minimize skin contact. Special precautions should be taken so product cannot get inside gloves.

OTHER CLOTHING AND EQUIPMENT
Protective clothing consisting of long sleeve shirt and long pants, should be worn when handling this product. The clothing should be changed at least daily. Persons exposed routinely to this active material should shower prior to leaving work each day. Safety shower and eye-wash stations should be provided in all areas in which this product is stored and/or handled. Contaminated clothing should be removed and washed thoroughly before re-using.