



Material Safety Data Sheet

Page 1 of 8

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Malathion 50 Insect Spray

COMPANY IDENTIFICATION

CHEVRON CHEMICAL COMPANY
ORTHO CONSUMER PRODUCTS
P.O. BOX 5047
SAN RAMON, CA 94583-0947

EMERGENCY TELEPHONE NUMBERS

HEALTH (24 hr): (800)457-2022 or
(510)233-3737 (International)
TRANSPORTATION (24 hr): CHEMTREC
(800)424-9300 or (202)483-7616

2. COMPOSITION/INFORMATION ON INGREDIENTS

100.0 % ~~Malathion 50 Insect Spray~~

CONTAINING

COMPONENTS	AMOUNT	LIMIT/QTY	AGENCY/TYPE
MALATHION			
Chemical Name: DIMETHYLDITHIOPHOSPHATE-DIETHYL MERCAPTOSUCCINATE			
CAS121755	50.0%	10 mg/m3	ACGIH TWA
		15 mg/m3	OSHA PEL
		100 LBS	CERCLA 302.4 RQ
AROMATIC PETROLEUM DERIVATIVE SOLVENT	< 32.0%		
XYLENE			
Chemical Name: BENZENE, DIMETHYL-			
CAS1330207	< 1.7%	100 ppm	ACGIH TWA
		150 ppm	ACGIH STEL
		100 ppm	OSHA PEL
		1,000 LBS	CERCLA 302.4 RQ
INERT INGREDIENTS	17.0%		

Revision Number: 1 Revision Date: 12/09/93 MSDS Number: 005465
NDA - No Data Available NA - Not Applicable

Prepared according to the OSHA Hazard Communication Standard
(29 CFR 1910.1200) and the ANSI MSDS Standard (Z400.1) by the Toxicology
and Health Risk Assessment Unit, CRTG, P.O. Box 4054, Richmond, CA 94804

"Inert Ingredients" is a term defined by the U.S. Environmental Protection Agency under the Federal Insecticide, Fungicide and Rodenticide Act (40 CFR 158.153). It refers to any substance, other than an active ingredient, which is intentionally added to a pesticide product. Some inert ingredients may be hazardous chemicals, as defined by the Federal OSHA Hazard Communication Standard (29 CFR 1910.1200). The hazards associated with these inert ingredients have been included in this document.

LABEL COMMENT:

This Material Safety Data Sheet (MSDS) contains health, safety and environmental information for you and your employees. It does not replace the precautionary use, storage and disposal information presented on the product label. This information will help you to prepare for emergency response and to meet community right-to-know/ emergency response and reporting requirements under SARA Title III and many other laws. Emergency response agencies and health care providers will also find this additional information useful.

Homeowner consumer use, storage and disposal are regulated by the EPA through the approved label copy, and it is a violation of Federal law to use the product in any manner not prescribed on the EPA-approved label. In order to avoid confusion, this MSDS should not be distributed to homeowner consumers.

Although an MSDS is not required for a consumer product used by the homeowner, we provide this MSDS for employers who handle or store large quantities of this product (e.g. transporters, warehouses and retailers).

This MSDS should also be made available to any employee whose exposure to the product in quantity, frequency or duration may be greater than that of a homeowner consumer.

This MSDS should be supplied to subsequent transporters, shippers, warehouses, retailers or employers where handling, storing or use of this product exceed in quantity, frequency or duration those of a homeowner consumer.

- | | |
|----------------------------------|--|
| TLV - Threshold Limit Value | TWA - Time Weighted Average |
| STEL - Short-term Exposure Limit | TPQ - Threshold Planning Quantity |
| RQ - Reportable Quantity | PEL - Permissible Exposure Limit |
| C - Ceiling Limit | CAS - Chemical Abstract Service Number |
| A1-5 - Appendix A Categories | () - Change Has Been Proposed |

3. HAZARDS IDENTIFICATION

***** EMERGENCY OVERVIEW *****

Amber liquid with garlic-like odor

- CAUSES SUBSTANTIAL BUT TEMPORARY EYE DAMAGE

Revision Number: 1 Revision Date: 12/09/93 MSDS Number: 005465
NDA - No Data Available NA - Not Applicable

- HARMFUL IF SWALLOWED
- FLAMMABLE
- KEEP OUT OF REACH OF CHILDREN

POTENTIAL HEALTH EFFECTS

EYE:

This substance is a moderate eye irritant and could cause prolonged (weeks) impairment of your vision. The degree of the injury will depend on the amount of material that gets into the eye and the speed and thoroughness of the first aid treatment.

SKIN:

If absorbed through the skin, this substance is considered practically non-toxic to internal organs. This substance may cause skin irritation on prolonged or frequently repeated contact.

INGESTION:

This substance is slightly toxic to internal organs if swallowed. The degree of injury will depend on the amount absorbed from the gut. Because of the low viscosity of this substance, it can directly enter the lungs if it is swallowed (this is called aspiration). This can occur during the act of swallowing or when vomiting the substance. Once in the lungs, the substance is very difficult to remove and can cause severe injury to the lungs and death.

INHALATION:

If inhaled, this substance is considered practically non-toxic to internal organs.

SIGNS AND SYMPTOMS OF EXPOSURE:

INGESTION - May be seen, usually within 12 hours following overexposure, may include, but may not be limited to, headache, dizziness, weakness, constriction of the pupil of the eye, blurred or dark vision, excessive salivation or nasal discharge, profuse sweating, abdominal cramps, nausea and vomiting. Incontinence, unconsciousness and convulsions indicate severe poisoning. In untreated severe poisoning, respiratory depression or cardiac arrest may be fatal.

4. FIRST AID MEASURES

EMERGENCY NUMBER (24 hr): (800)457-2022 or (510)233-3737 (International)

EYE:

Flush eyes immediately with fresh water for at least 15 minutes while holding the eyelids open. Remove contact lenses if worn. If irritation persists, see a doctor.

SKIN:

No first aid procedures are required. As a precaution, wash skin thoroughly with soap and water. Remove and wash contaminated clothing.

INGESTION:

If swallowed, give water or milk to drink and telephone for medical advice. DO NOT make person vomit unless directed to do so by medical personnel. If medical advice cannot be obtained, then take the person and product container to the nearest medical emergency treatment center or hospital.

Revision Number: 1

Revision Date: 12/09/93

MSDS Number: 005465

NDA - No Data Available

NA - Not Applicable

INHALATION:

Since this material is not expected to be an immediate inhalation problem, no first aid procedures are required.

NOTE TO PHYSICIANS:

This material contains a cholinesterase inhibitor. Measurement of blood cholinesterase activity may be useful in monitoring exposure. If signs of cholinesterase inhibition appear, atropine sulfate is antidotal. 2-PAM (PROTOPAM) is also antidotal and may be used in conjunction with atropine but should not be used alone.

Ingestion of this product or subsequent vomiting can result in aspiration of light hydrocarbon liquid which can cause pneumonitis.

5. FIRE FIGHTING MEASURES

FLAMMABLE PROPERTIES

FLASH POINT: (TOC) 106F (41C)

AUTOIGNITION: NDA

FLAMMABILITY LIMITS (% by volume in air): Lower: NDA Upper: NDA

EXTINGUISHING MEDIA:

CO₂, Dry Chemical, Foam and Water Fog.

NFPA RATINGS: Health 2; Flammability 2; Reactivity 0.

FIRE FIGHTING INSTRUCTIONS:

Liquid evaporates and forms vapor (fumes) which can catch fire and burn with explosive violence. Invisible vapor spreads easily and can be set on fire by many sources such as pilot lights, welding equipment, and electrical motors and switches. Fire hazard is greater as liquid temperature rises above 85 F.

Products of combustion from fires involving this material may be toxic. Avoid breathing smoke and mists. Avoid personnel and equipment contact with fallout and runoff. Minimize the amount of water used for fire fighting. Do not enter any enclosed area without full protective equipment, including self-contained breathing equipment. Contain and isolate runoff and debris for proper disposal. Decontaminate personal protective equipment and fire fighting equipment before reuse. Read the entire document.

COMBUSTION PRODUCTS:

Normal combustion forms carbon dioxide and water vapor and may produce oxides of sulfur and phosphorus. Incomplete combustion can produce carbon monoxide.

6. ACCIDENTAL RELEASE MEASURES

ACCIDENTAL RELEASE MEASURES:

Eliminate all sources of ignition in vicinity of spill or released vapor. Clean up spills immediately, observing precautions in Exposure Controls/Personal Protection section. Cover spill with a generous amount of Oil Dry, cat litter, clay, rags or other absorbent. Use a stiff broom to mix thoroughly. Sweep up and place in a disposable container. Scrub

Revision Number: 1 Revision Date: 12/09/93 MSDS Number: 005465
NDA - No Data Available NA - Not Applicable

contaminated area with detergent and water using a stiff broom. Pick up liquid with additional absorbent and place in a disposable container.

7. HANDLING AND STORAGE

HANDLING AND STORAGE:

READ AND OBSERVE ALL PRECAUTIONS ON PRODUCT LABEL.

DO NOT USE OR STORE near flame, sparks or hot surfaces. USE ONLY IN WELL VENTILATED AREA. DO NOT weld, heat or drill container. Replace cap or bung. Emptied container still contains hazardous or explosive vapor or liquid. Keep pesticide in original container. Do not store or transport near food or feed.

Do not apply directly to water or wetlands. Do not contaminate water by cleaning of equipment or disposal of waste. For help with any spill, leak, fire or exposure involving this material, call day or night (800) 454-2333.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

PERSONAL PROTECTIVE EQUIPMENT

EYE/FACE PROTECTION:

Do not get this material in your eyes. Eye contact should be avoided by wearing ~~chemical~~ goggles or a face shield.

SKIN PROTECTION:

Avoid contact with skin or clothing. Skin contact should be minimized by wearing protective clothing including gloves.

RESPIRATORY PROTECTION:

No special respiratory protection is normally required. However, if operating conditions create airborne concentrations which exceed the recommended exposure standards, the use of an approved respirator is required.

ENGINEERING CONTROLS:

Use this material only in well ventilated areas.

9. PHYSICAL AND CHEMICAL PROPERTIES

PHYSICAL DESCRIPTION:

Amber liquid with garlic-like odor

pH:	NDA
VAPOR PRESSURE:	<10 mm Hg @ 25C
VAPOR DENSITY (AIR=1):	4.5
BOILING POINT:	300F (Approx.)
FREEZING POINT:	NDA
MELTING POINT:	<-50F
SOLUBILITY:	Miscible in water; Soluble in most organic solvents.

Revision Number: 1

Revision Date: 12/09/93

MSDS Number: 005465

NDA - No Data Available

NA - Not Applicable

SPECIFIC GRAVITY: 1.07
DENSITY: NDA
EVAPORATION RATE: .20 (n-Butyl Acetate=1)
PERCENT VOLATILE
(VOL): 35%

10. STABILITY AND REACTIVITY

HAZARDOUS DECOMPOSITION PRODUCTS:

NDA

CHEMICAL STABILITY:

Stable.

CONDITIONS TO AVOID:

No data available.

INCOMPATIBILITY WITH OTHER MATERIALS:

No data available.

HAZARDOUS POLYMERIZATION:

Polymerization will not occur.

11. TOXICOLOGICAL INFORMATION

EYE EFFECTS:

Corneal involvement or irritation clearing in 8-21 days.

SKIN EFFECTS:

Mild to slight irritation at 72 hours. (No irritation or slight erythema.)
The dermal LD50 in rabbits is greater than 2 g/kg.

ACUTE ORAL EFFECTS:

The oral LD50 in male rats is 2.314 g/kg. The oral LD50 in female rats is 2.13 g/kg.

ACUTE INHALATION EFFECTS:

The 4-hour inhalation LC50 in rats is greater than 5 mg/l for the product diluted at a ratio of 1 to 2.5.

ADDITIONAL TOXICOLOGY INFORMATION:

This product contains xylene, a chemical that has been reported to cause developmental toxicity in rats and mice exposed by inhalation during pregnancy. The effects noted consisted of delayed development and minor skeletal variations; additionally, when pregnant mice were exposed by ingestion to a level that killed nearly one-third of the test group, lethality (resorptions) and malformations (primarily cleft palate) occurred. Malformations have not been reported following inhalation exposure. Because of the very high levels of exposure used in these studies, we do not believe that their results imply an increased risk of reproductive toxicity to workers exposed to xylene levels at or below the exposure standard.

Xylene has given negative results in several mutagen testing assays including the Ames assay. In a cancer study sponsored by the National Toxicology Program (NTP), technical grade xylene gave no evidence of carcinogenicity in rats or mice dosed daily for two years.

Revision Number: 1

Revision Date: 12/09/93

MSDS Number: 005465

NDA - No Data Available

NA - Not Applicable

Mixed xylenes have been shown to cause probable hearing loss in rats exposed to 800 ppm in the air for 14 hours per day for six weeks. Although no information is available for lower concentrations, other chemicals that cause hearing loss in rats at relatively high concentrations do not cause hearing loss at low concentrations. Men exposed to 135 to 400 ppm of m-xylene for over 3 hours per day for a total of 4 days showed no hearing loss. Worker exposure to xylenes at the permissible exposure limit (100 ppm, time-weighted average) is not expected to cause hearing loss.

12. ECOLOGICAL INFORMATION

ECOTOXICITY:

Highly toxic to bees exposed to direct treatment or residues on blooming crops or weeds.

This material is toxic to aquatic organisms and should be kept out of sewage and drainage systems and all bodies of water.

ENVIRONMENTAL FATE:

No data available.

13. DISPOSAL CONSIDERATIONS

DISPOSAL CONSIDERATIONS:

Check governmental regulations and local authorities for approved disposal of this material.

14. TRANSPORT INFORMATION

The description shown may not apply to all shipping situations. Consult 49CFR, or appropriate Dangerous Goods Regulations, for additional description requirements (e.g., technical name) and mode-specific or quantity-specific shipping requirements.

DOT SHIPPING NAME: NDA
DOT HAZARD CLASS: NDA
DOT IDENTIFICATION NUMBER: NDA
DOT PACKING GROUP: NDA

15. REGULATORY INFORMATION

SARA 311 CATEGORIES:	1. Immediate (Acute) Health Effects:	YES
	2. Delayed (Chronic) Health Effects:	NO
	3. Fire Hazard:	YES
	4. Sudden Release of Pressure Hazard:	NO

Revision Number: 1

Revision Date: 12/09/93

MSDS Number: 005465

NDA - No Data Available

NA - Not Applicable

5. Reactivity Hazard:

NO

REGULATORY LISTS SEARCHED:

01=SARA 313	11=NJ RTK	21=TSCA Sect 4(e)
02=MASS RTK	12=CERCLA 302.4	22=TSCA Sect 5(a)(2)
03=NTP Carcinogen	13=MN RTK	23=TSCA Sect 6
04=CA Prop 65-Carcin	14=ACGIH TWA	24=TSCA Sect 12(b)
05=CA Prop 65-Repro Tox	15=ACGIH STEL	25=TSCA Sect 8(a)
06=IARC Group 1	16=ACGIH Calc TLV	26=TSCA Sect 8(d)
07=IARC Group 2A	17=OSHA PEL	27=TSCA Sect 4(a)
08=IARC Group 2B	18=DOT Marine Pollutant	28=Canadian WHMIS
09=SARA 302/304	19=Chevron TWA	29=OSHA CEILING
10=PA RTK	20=EPA Carcinogen	30=Chevron STEL

The following components of this material are found on the regulatory lists indicated.

DIMETHYLDITHIOPHOSPHATE-DIETHYL MERCAPTOSUCCINATE

is found on lists: 02,10,11,12,13,14,17,18,

BENZENE, DIMETHYL-

is found on lists: 01,02,10,11,12,13,14,15,17,

16. OTHER INFORMATION

NFPA RATINGS: Health 2; Flammability 2; Reactivity 0;

(Least-0, Slight-1, Moderate-2, High-3, Extreme-4). These values are obtained using the guidelines or published evaluations prepared by the National Fire Protection Association (NFPA) or the National Paint and Coating Association (for HMIS ratings).

REVISION STATEMENT:

PRODUCT DISCONTINUED. This Material Safety Data Sheet will no longer be updated.

The above information is based on the data of which we are aware and is believed to be correct as of the date hereof. Since this information may be applied under conditions beyond our control and with which we may be unfamiliar and since data made available subsequent to the date hereof may suggest modification of the information, we do not assume any responsibility for the results of its use. This information is furnished upon condition that the person receiving it shall make his own determination of the suitability of the material for his particular purpose.

Revision Number: 1 Revision Date: 12/09/93 MSDS Number: 005465
 NDA - No Data Available NA - Not Applicable