

**1. PRODUCT AND COMPANY IDENTIFICATION**

**Date of issue:** August 2015  
**Product Name:** Malathion-Oil  
**EPA Reg. No.** 829-175  
**Recommended Use:** Organophosphate pesticide  
**Chemical Name:** O,O-Dimethyl phosphorodithioate of diethylmercaptosuccinate  
**Synonyms:** Malathion, Cythion  
**Restrictions on Use:** See label directions  
**Company:** Southern Agricultural Insecticides, Inc  
P.O. Box 218  
Palmetto, FL 34220  
(941) 722-3285  
**Emergency Telephone Numbers:** Chemtrec (800) 424-9300 (24 hour transportation spill response)  
Medical: Rocky Mountain Poison Control Center (866) 673-6671 (24hrs)

This product is an EPA FIFRA\ registered pesticide. Some of the classifications on this SDS are not the same as the FIFRA label. Certain sections of this SDS are superseded by federal law governed by EPA for a registered pesticide. Please see Section 15: REGULATORY INFORMATION for explanation.

**2. HAZARD(S) IDENTIFICATION****HEALTH HAZARDS**

**Aspiration toxicant:** Category 1.  
**Acute inhalation toxicant:** Category 4.  
**Signal Word:** Danger

**GHS Symbol:**

**Health Hazards:** May be fatal if swallowed and enters airways.  
Harmful if inhaled.

**Precautionary statements:**

**Prevention:** Wash thoroughly after handling. Avoid breathing dust/fume/gas/mist/vapors/spray. Wear protective gloves chemically resistant to this material. Examples of preferred glove barrier materials include: Neoprene, Nitrile/butadiene rubber ("nitrile" or "NBR") or Polyvinyl chloride ("PVC" or "vinyl"). Wear eye protection/face protection (see Section 8). Wash face and hands thoroughly after handling. Do not eat, drink or smoke when using this product. Use only outdoors or in well-ventilated area. Prevent from entering into sewers, waterways and/or groundwater. See Section 12: Ecological Information. Keep only in original container.

**Response:** If swallowed: Immediately call a poison control center/doctor. Rinse mouth. Do NOT induce vomiting. If on skin: Wash with plenty of water. If skin irritation occurs: Get medical advice/attention. Take off contaminated clothing and wash it before reuse. If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention. If exposed: Call poison center/doctor. Specific treatment see Note to Physician, Section 4: First-Aid Measures. Absorb spillage to prevent material damage.

**Storage:** Store locked up in corrosive resistant container (high density polyethylene).

**Disposal:** Disposal of contents/container must be in accordance with your local or area regulatory authorities.

**Note:** This information is based on test data from similar products.

#### Other

This material should not be used for any other purpose than the intended use in Section 1 without expert advice. Health studies have shown that chemical exposure may cause potential human health risks which may vary from person to person.

### 3. COMPOSITION/INFORMATION ON INGREDIENTS

<u>Components</u>	<u>CAS NO:</u>	<u>% By Wt.</u>	<u>OSHA PEL</u>	<u>ACGIH TLV</u>
Active Ingredient: Malathion	121-75-5	5.0	N/A	10 mg/m <sup>3</sup>

<u>Chemical Name: Mineral Oil (Mixture)</u>	<u>CAS #</u>	<u>Percent ( wt)</u>
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The base oil may be a mixture of the following:

1) Hydrotreated Distillate, Heavy Paraffin	64742-54-7	
2) Hydrotreated Distillate, Light Paraffin	64742-55-8	75
3) Hydrotreated Neutral Oil	72623-87-1	
4) White Mineral Oil	8042-47-5	
Proprietary additives		20
None		

### 4. FIRST AID MEASURES

**Inhalation:** Remove from further exposure. For those providing assistance, avoid exposure to yourself or others. Use adequate respiratory protection. If respiratory irritation, dizziness, nausea, or unconsciousness occurs, seek immediate medical assistance. If breathing has stopped, assist ventilation with a mechanical device or use mouth-to-mouth resuscitation.

**If Swallowed:** Call a poison control center or doctor immediately for treatment advice. Rinse mouth with water, have person sip a glass of water if able to swallow. Do not induce vomiting unless told to do so by the poison control center or doctor. Do not give anything by mouth to an unconscious person. Have product label with you when calling a poison control center or doctor.

**Skin Contact:** Immediately flush skin with water for 15 minutes while removing contaminated clothing and shoes. Get medical attention if symptoms occur. Wash clothing before reuse. Destroy contaminated leather items such as shoes, belts and watchbands.

**Eye:** Flush thoroughly with water. If irritation occurs, get medical assistance.

### 5. FIRE-FIGHTING MEASURES

**Fire Fighting Instructions:** Evacuate area. Prevent run-off from fire control or dilution from entering streams, sewers or drinking water supply. Fire-fighters should use standard protective equipment and in enclosed spaces, self-contained breathing apparatus (SCBA). Use water spray to cool fire exposed surfaces and to protect personnel.

### EXTINGUISHING MEDIA

Appropriate Extinguishing Media: Use water fog, foam, dry chemical or carbon dioxide (CO<sub>2</sub>) to extinguish flames. Inappropriate Extinguishing Media: Straight streams of water.

### FLAMMABILITY PROPERTIES

<u>Flash Point ASTM D92 (open cup typical)</u>	<u>Flammable Limits</u>
Soluble Oil Spray 160 (320)	(Approximate volume in air): LEL: N/D UEL: N/D Autoignition Temperature: N/D

## Hazardous Combustion

**Products:** Vapors and fumes are hazardous. Vapors can form explosive mixtures with air. Oxides of sulfur and phosphorus-containing compounds. Incomplete combustion may lead to formation of carbon monoxide and/or other asphyxiants.

Degree of Hazard	NFPA	HMIS	HAZARD RATINGS	
Health	1	1	0	Insignificant
Fire	1	1	1	Slight
Reactivity	0	0	2	Moderate
Personal Protection		B	3	High

## 6. ACCIDENTAL RELEASE MEASURES

### Steps to be taken if Material is Released or Spilled:

Contain spilled material if possible. Small spills: Contain and absorb spilled material with inert, non-combustible absorbent material, sweep up. Collect in suitable and properly labeled containers. Large spills: Contact Southern Agricultural Insecticides, Inc. for clean-up assistance. See Section 13: Disposal Considerations, for additional information.

### Personal Precautions:

Isolate area. Keep unnecessary and unprotected personnel from entering the area. Refer to Section 7, Handling, for additional precautionary measures. Spilled material may cause a slipping hazard. Ventilate area of leak or spill. Use appropriate safety equipment. For additional information, refer to Section 8: Exposure Controls and Personal Protection.

**Environmental Precautions:** Prevent spilled material from entering into soil, ditches, sewers, waterways and/or groundwater. See Section 12: Ecological Information.

## 7. HANDLING AND STORAGE

### KEEP OUT OF REACH OF CHILDREN

**Handling:** **General Handling:** Avoid contact with eyes, skin, and clothing. Wash thoroughly with soap and water after handling. Do not swallow. Avoid breathing vapor. Use with adequate ventilation. Wear chemical protective equipment when handling. Keep away from heat, sparks and flame. See Section 8: Exposure Controls and Personal Protection.

**Storage:** Store locked up in a cool, dry, well-ventilated area designated specifically for pesticides and away from heat sources. Keep in original containers and keep containers closed when not in use. Never heat above 131°F (55°C), and do not store for long periods of time at a temperature in excess of 77° F (25°C). Do not store near children, food, foodstuffs, drugs or potable water supplies.

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

### Mineral Oil:

Exposure limits/standards for materials that can be formed when handling this product: When mists / aerosols can occur, the following are recommended: 5 mg/m<sup>3</sup> - ACGIH TLV, 10 mg/m<sup>3</sup> - ACGIH STEL.

### Malathion:

Exposure Limits: (8-Hour TWA): Malathion 15 mg/m<sup>3</sup> (Skin); 1 mg/m<sup>3</sup> (Inhalable)

## ENGINEERING CONTROLS

**Users of a pesticidal product should refer to the product label for personal protective equipment requirements.**

Control measures to consider: No special requirements under ordinary conditions of use and with adequate ventilation potential .

## PERSONAL PROTECTION

Personal protective equipment selections vary based on potential exposure conditions such as applications, handling practices, concentration and ventilation. Information on the selection of protective equipment for use with this material, as provided below, is based upon intended, normal usage.

- Respiratory Protection:** Avoid breathing vapors or spray mist. For repeated or prolonged use wear a NOISH- approved chemical cartridge or full face respirator with pesticide cansiters.
- No special requirements under ordinary conditions of use and with adequate ventilation.
- Hand Protection:** Use gloves chemically resistant to this material. Examples of preferred glove barrier materials include: Neoprene, Nitrile/butadiene rubber (“nitrile” or “NBR”) or Polyvinyl chloride (“PVC” or “vinyl”).
- No protection is ordinarily required under normal conditions of use.
- Eye Protection:** If contact is likely, safety glasses with side shields are recommended.
- Skin and Body Protection:** No skin protection is ordinarily required under normal conditions of use. In accordance with good industrial hygiene practices, precautions should be taken to avoid skin contact.
- Specific Hygiene Measures** Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants. Discard contaminated clothing and footwear that cannot be cleaned. Practice good housekeeping.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

<b>Physical State:</b>	Liquid
<b>Color:</b>	amber
<b>Odor:</b>	miner oil odor
<b>Flash Point:</b>	>200°F
<b>Vapor Pressure (mmHg):</b>	< 0.013 kPa (0.1 mm Hg) at 20°C Information applies to the mineral oil.
<b>Boiling Point:</b>	>200°F Information applies to the mineral oil.
<b>Vapor Density (air = 1):</b>	N/A
<b>Bulk Density (H2O = 1):</b>	7.33 lbs. /gal.
<b>Freezing Point:</b>	N/A
<b>Solubility in water (wt. - weight):</b>	Emulsifies
<b>pH:</b>	2-7
<b>Viscosity:</b>	N/A
<b>Volatiles:</b>	N/A

## 11. TOXICOLOGICAL INFORMATION

Information provided for the active ingredient Malathion: (Data submitted for Malathion represents 10 times the amount contained in this product. No revision for the reduction in concentration has been applied to the data as given

### Acute Toxicity:

<b>Ingestion:</b>	Oral, LD <sub>50</sub> , (rat):	>550 mg/kg
<b>Dermal:</b>	Dermal, LD <sub>50</sub> , (rabbit):	>2,000 mg/kg
<b>Inhalation:</b>	Inhalation, 4 h, LC <sub>50</sub> ,(rat):	>5.2 mg/l
<b>Eye Irritation:</b>	Slightly irritating (rabbit)	
<b>Skin Irritation:</b>	Slightly irritating (rabbit)	
<b>Sensitization Skin:</b>	Non-sensitizer (guinea pig)	

**Chronic Toxicity:** None known

**Carcinogenicity:** Not listed as carcinogenic by ACGIH, IARC, OSHA or NTP

**Teratogenicity, mutagenicity, and other reproductive effects:** None known

**Information provided for the solvent naphtha (Petroleum), Heavy Aromatic**

**Acute Toxicity:**

**Ingestion:** Oral, LD<sub>50</sub>, (rat): >5000 mg/kg  
**Dermal:** Dermal, LD<sub>50</sub> (rabbit): >2,000 mg/kg  
**Inhalation:** Inhalation, 4 h, LC<sub>50</sub> (rat): >4688 mg/m<sup>3</sup> (vapor) Minimally toxic  
**Eye Irritation:** May cause mild, short-lasting discomfort to eyes. Based on test data for structurally similar materials.  
**Skin Irritation:** Slightly irritating, may dry skin causing discomfort  
**Sensitization Skin:** Not expected to be a skin sensitizer. Based on test data for structurally similar materials.

**Other Toxicity Information:**

Solvent contains Naphthalene

**Acute Toxicity:**

Inhalation 4 h, LC<sub>50</sub>, Rat > 0.4mg/l ( Max. attainable vapor conc.)  
Oral Lethality: LD<sub>50</sub> Mouse 533 mg/kg

The following ingredient is cited on the lists below:

<u>Chemical Name</u>	<u>CAS Number</u>	<u>Citations</u>
Naphthalene	91-20-3	NTP SUS IARC 2B

**CHRONIC/OTHER EFFECTS For the product itself:**

Repeated and/or Prolonged exposure may cause irritation to the skin, eyes, or respiratory tract.

Base oil severely refined: Not carcinogenic in animal studies. Representative material passes IP-346, Modified Ames test, and/or/other screening tests. Dermal and inhalation studies showed minimal effects; lung non-specific infiltration of immune cells, oil deposition and minimal granuloma formation. Not sensitizing in test animals.

**CARCINOGENIC EFFECTS**

Base Oil:

Contains no carcinogens. Similar compounds essentially non-toxic. No component of this product at levels greater than 0.1 is identified as a carcinogen by ACGIH or the International Agency for Research on Cancer (IARC). No component of this product present at levels greater than 0.1 is identified as a carcinogen by the U.S. National Toxicology Program (NTP) or the U.S. Occupational Safety and Health Act (OSHA), NTP or IARC.

Although there is no specific test data on all the base oil components, the mineral base oil would not be expected to exhibit carcinogenic potential based on what is known of the toxicity of mineral base oils in general.

The DMSO extract by IP 346 of the oil is less than 3. (Typical 0.2 with Maximum 0.5) Consequently it is not classified as a carcinogen.

The base oil in this product is severely hydro-treated by all hydro-processing route. By this refining history showed no evidence of carcinogenic potential.

**MUTAGENIC EFFECTS:** No component of this product at levels greater than 0.1 is classified by established regulatory criteria as a mutagen.

**TERATOGENIC EFFECTS/DEVELOPMENTAL TOXICITY:** No component of this product at levels greater than 0.1 is classified by established regulatory criteria as teratogenic or embryotoxic.

**REPRODUCTION TOXICITY:** No component of this product at levels greater than 0.1 is classified by established regulatory criteria as a reproductive toxin.

## OVER - EXPOSURE SIGNS/SYMPTOMS

**Skin** No information available  
**Ingestion** No information available  
**Inhalation** No information available

## 12. ECOLOGICAL INFORMATION

**The Information presented here is for the active ingredient Malathion.**

### ENVIRONMENTAL FATE:

This product is toxic to birds, fish, aquatic invertebrates, aquatic life, and stages of amphibians and highly toxic to bees.

### Persistence and Degradability:

Medium mobility, readily biodegradable

### Aquatic Toxicity:

Daphnia magna, 48 h, EC 0: 0.72 mg/L  
Green Algae, 72 h, LC<sub>50</sub>: 4.06 mg/L  
Rainbow Trout, 96 h, LC<sub>50</sub>: 0.18 mg/kg

### Bird Toxicity:

Bobwhite Quail, LD<sub>50</sub>: 359 mg/kg  
Mallard Duck, LD<sub>50</sub>: 1485 mg/kg

**The Information presented here is for the solvent naphtha (Petroleum), Heavy Aromatic.**

### ENVIRONMENTAL FATE

Expected to be toxic to aquatic organisms.

### Persistence and Degradability:

Expected to be inherently biodegradable

### Aquatic Toxicity - Acute

Daphnia magna, 48 h, EL50 >=3-,=10 mg/L

### Persistence, Degradability and Bioaccumulation Potential

<u>Media</u>	<u>Test Type</u>	<u>Duration</u>	<u>Test Results</u>
Water	Ready Biodegradability	28 days	Percent Degraded 57.95

### Other Information

**VOC (EPA Method 24):** 7.477 lbs/gal.

## 13. DISPOSAL CONSIDERATIONS

If wastes and/or containers cannot be disposed of according to the product label directions, disposal of this material must be in accordance with your local or area regulatory authorities. This information presented only applies to the material as supplied. The identification based on characteristic(s) or listing may not apply if the material has been used or otherwise contaminated. It is the responsibility of the waste generator to determine the toxicity and physical properties of the material generated to determine the proper waste identification and disposal methods in compliance with applicable regulations. If the material as supplied becomes a waste, follow all applicable regional, national and local laws.

## 14. TRANSPORT INFORMATION

**US DOT Classification:** Not Regulated

**Freight Class:** Pesticides, NOI - including defol, fung, herb, or insect. 155050

**IMDG/IMO (vessel):** UN-3082, Environmentally hazardous substance, Liquid, N.O.S., (Malathion), 9, III, Marine pollutant.

**IATA/ICAO (air):** UN-30B2, Environmentally hazardous substance, Liquid, N.O.S, (Malathion), 9, III, Marine pollutant.

This information is not intended to convey all specific regulatory or operational requirements/information relating to this product. Additional transportation system information can be obtained through an authorized sales or customer service representative. It is the responsibility of the transporting organization to follow all applicable laws, regulations and rules relating to the transportation of the material

## 15. REGULATORY INFORMATION

### EPA:

**EPA FIFRA INFORMATION:** This chemical is a pesticide product registered by the United States Environmental Protection Agency and is subject to certain labeling requirements under federal pesticide law. These requirements differ from the classification criteria and hazard information required for safety data sheets (SDS), and for workplace labels of non-pesticide chemical. The hazard information required on the pesticide label is listed out below. The pesticide label also includes other important information, including directions for use.

**EPA/CERCLA Reportable Quantity:** Malathion: (CAS: 121-75-5): 100 pounds

### United States

#### EPA SARA Title III Chemical Listings

Section 302 Extremely Hazardous Substances: None.

#### SARA 311/312 CATEGORIES

- |                                       |     |
|---------------------------------------|-----|
| 1. Immediate (Acute) Health Effects:  | YES |
| 2. Delayed (Chronic) Health Effects:  | NO  |
| 3. Fire Hazard:                       | NO  |
| 4. Sudden Release of Pressure Hazard: | NO  |
| 5. Reactivity Hazard:                 | NO  |

**OSHA HAZARD COMMUNICATION STANDARD:** When used for its intended purposes, this material is not classified as hazardous in accordance with OSHA 29 CFR 1910.1200.

#### California Proposition 65 (Safe Drinking Water and Toxic Enforcement Act of 1986):

This product is listed.

## 16. OTHER INFORMATION

Southern Agricultural Insecticides, Inc. urges each customer or recipient of this (M)SDS study it carefully and consult appropriate expertise, as necessary or appropriate, to become aware of and understand the data contained in this (M)SDS and any hazards associated with the product. The information herein is provided in good faith and believed to be accurate as of the effective date shown above. However, no warranty, express or implied, is given. Regulatory requirements are subject to change and may differ between various locations. It is the buyer's/user's responsibility to ensure that his activities comply with all federal, state, provincial or local laws. The information presented here pertains only to the product as shipped. Since conditions for use of the product are not under the control of the manufacturer, it is the buyer's/user's duty to determine the conditions necessary for the safe use of this product. Due to the proliferation of sources for information such as manufacturer-specific (M)SDSs, we are not and cannot be responsible for (M)SDSs obtained from any source other than ourselves. If you have obtained an (M)SDS from another source or if you are not sure that the (M)SDS you have is current, please contact us for the most current version.