

## Chemspray Malathon

### Section 1 - Identification of Chemical Product and Company

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**Trade Name:** Chemspray Malathon  
**Product Use:** Controls aphids, thrips and other insect pests according to the label.  
**Creation Date:** May 2004  
**Revision Date:** June 2008

### Section 2 - Hazards Identification

#### Statement of Hazardous Nature

This product is classified as hazardous according to the criteria of ASCC Australia. (Xn Harmful) Dangerous Good according to the Australian Dangerous Goods (ADG) Code.

**Risk Phrases:** R22 Harmful if swallowed

**Safety Phrases:** S24 Avoid contact with skin

**SUSDP Classification:** S6

**ADG Classification:** 9 Miscellaneous Dangerous Goods. **Sub Risk Class:** None allocated.

**UN Number:** 3082

**Packaging Group:** III

**Hazchem Code:** 2X

#### Emergency Overview

**Physical Description & colour:** Clear amber liquid

**Odour:** Characteristic Odour

**Major Health Hazards:** Prolonged or repeated exposure may show adverse effects on the liver & kidneys

#### Potential Health Effects

Acute overexposure: Headache and nausea due to solvent and salivation, diarrhoea, twitching, vomiting and convulsions from Malathion.

**Inhalation:** Inhalation of solvent may cause nausea and headache but effects due to Malathion are unlikely. Inhalation of vapours from the product is unlikely due to the low vapour pressure of each active ingredient however inhalation of excessive amounts of spray mist may cause cholinesterase inhibition.

**Skin Contact:** Product may irritate the skin. Malathion can be absorbed through the skin. Prolonged or repeated exposure to the solvent in the product may cause defatting of skin which could lead to secondary dermatitis. A chronic hazard may exist after repeated contact, due to the solvent present.

**Eye Contact:** Data suggests that this product should present no significant problems to typical persons if used as intended.

**Ingestion:** Data suggests that this product is harmful if swallowed.

#### Carcinogen Status:

**ASCC:** No significant ingredient is classified as carcinogenic by ASCC.

**NTP:** No significant ingredient is classified as carcinogenic by NTP.

**IARC:** No significant ingredient is classified as carcinogenic by IARC.

### Section 3 - Composition/Information on Ingredients

Ingredients	CAS No	Conc,%	TWA (mg/m3)	STEL (mg/m3)
Malathion	121-75-5	50	10	not set
Non hazardous hydrocarbon solvent	secret	49	not set	not set
Non hazardous surfactant	secret	1	not set	not set

This is a commercial product whose exact ratio of components may vary. Trace quantities of impurities are also likely.

#### MATERIAL SAFETY DATA SHEET

The TWA exposure value is the average airborne concentration of a particular substance when calculated over a normal 8 hour working day for a 5 day working week. The STEL (Short Term Exposure Limit) is an exposure value that should not be exceeded for more than 15 minutes and should not be repeated for more than 4 times per day. There should be at least 60 minutes between successive exposures at the STEL. The term "peak" is used when the TWA limit, because of the rapid action of the substance, should never be exceeded, even briefly.

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## Section 4 - First Aid Measures

### General Information:

You should call The Poisons Information Centre if you feel that you may have been poisoned, burned or irritated by this product. The number is 13 1126 from anywhere in Australia (0800 764 766 in New Zealand) and is available at all times. Have this MSDS with you when you call.

Eyebaths or eyewash stations and safety deluge showers should be provided where this product is being used.

**Inhalation:** No first aid measures normally required. However, if vapours or mists have been inhaled, and irritation has developed, remove to fresh air and observe until recovered. If irritation becomes painful or persists more than about 30 minutes, seek medical advice.

**Skin Contact:** If product gets on skin, immediately remove contaminated clothing and wash skin with soap and water for at least 15 minutes. If you begin to feel unwell or If irritation develops, seek medical attention.

**Eye Contact:** Flush the contaminated eye(s) with lukewarm, gently flowing water until the product is removed or until irritation has ceased, while holding the eyelid(s) open. Obtain medical advice if irritation becomes painful or lasts more than a few minutes.

**Ingestion:** If swallowed, call Poison Information Centre or doctor immediately. Do not induce vomiting unless instructed to do so by medical advice. Give atropine tablets if instructed to do so.

**Advice to Doctor:** A cholinesterase inhibitor. Atropine treatment may be required or treat with up to 10mg of IV diazepam - curare therapy is contraindicated. Treat hydrocarbon pneumonitis secondary to pulmonary oedema. Do not give adrenergic amines, aminophylline, succinylcholine, phenothiazines or reserpine alkaloids or oils.

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## Section 5 - Fire Fighting Measures

**Fire and Explosion Hazards:** There is a moderate risk of an explosion from this product if it is involved in a fire.

Fire decomposition products from this product may form toxic and corrosive mixtures in confined spaces. Vapours from this product are heavier than air and may accumulate in sumps, pits and other low-lying spaces, forming potentially explosive mixtures. They may also flash back considerable distances.

**Extinguishing Media:** Carbon dioxide, dry chemical, foam, water fog.

**Fire Fighting:** If a significant quantity of this product is involved in a fire, call the fire brigade.

**Flash point:** 64°C

**Upper Flammability Limit:** 7.0%

**Lower Flammability Limit:** 0.6%

**Auto ignition temperature:** no data

**Flammability Class:** C1 Flammable Liquid

**Decomposition Products:** Carbon dioxide, and if combustion is incomplete, carbon monoxide and smoke. Oxides of phosphorus. Water

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## Section 6 - Accidental Release Measures

**Accidental release:** Minor spills do not normally need any special cleanup measures. In the event of a major spill, prevent spillage from entering drains or water courses. Evacuate the spill area and deny entry to unnecessary and unprotected personnel. Immediately call the Fire Brigade. Wear full protective clothing including face mask, face shield and gauntlets. All skin areas should be covered. Thoroughly launder protective clothing before storage or re-use. See above under Personal Protection regarding Australian Standards relating to personal protective equipment. Stop leak if safe to do so, and contain spill. Absorb onto sand, vermiculite or other suitable absorbent material. Sweep up and shovel or collect recoverable product into labelled containers for recycling or salvage. After spills, wash area preventing runoff from entering drains. If a significant quantity of material enters drains, advise emergency services. Full details

### MATERIAL SAFETY DATA SHEET

regarding disposal of used containers, spillage and unused material may be found on the label. If there is any conflict between this MSDS and the label, instructions on the label prevail. Dispose of only in accord with all regulations. Advise laundry of nature of contamination when sending contaminated clothing to laundry.

## Section 7 - Handling and Storage

**Handling:** Keep exposure to this product to a minimum, and minimise the quantities kept in work areas. Check Section 8 of this MSDS for details of personal protective measures, and make sure that those measures are followed. The measures detailed below under "Storage" should be followed during handling in order to minimise risks to persons using the product in the workplace. Also, avoid contact or contamination of product with incompatible materials listed in Section 10.

**Storage:** This product is a S6 Poison. Observe all relevant regulations regarding sale, transport and storage of this class of product. Store in the closed original container in a dry, cool, well-ventilated area out of direct sunlight. Make sure that the product does not come into contact with substances listed under "Materials to avoid" in Section 10. Check packaging - there may be further storage instructions on the label.

## Section 8 - Exposure Controls and Personal Protection

The following Australian Standards will provide general advice regarding safety clothing and equipment:

Respiratory equipment: **AS/NZS 1715**, Protective Gloves: **AS 2161**, Industrial Clothing: **AS2919**, Industrial Eye Protection: **AS1336** and **AS/NZS 1337**, Occupational Protective Footwear: **AS/NZS2210**.

Exposure Limits	TWA (mg/m <sup>3</sup> )	STEL (mg/m <sup>3</sup> )	ADI (mg/Kg/day)	NOEL (mg/Kg/day)
Malathion	10	not set	0.02	2

*The STEL (Short Term Exposure Limit) is an exposure value that should not be exceeded for more than 15 minutes and should not be repeated for more than 4 times per day. There should be at least 60 minutes between successive exposures at the STEL. The exposure value at the TWA is the average airborne concentration of a particular substance when calculated over a normal 8 hour working day for a 5 day working week. A TWA has not been established by Worksafe Australia for any of the major ingredients in this product. There is a blanket limit of 10mg/m<sup>3</sup> for dusts or mists when limits have not otherwise been established. The nature of this product makes it unlikely that this level will be approached in normal use. ADI means Acceptable Daily Intake and NOEL means No-observable-effect-level. Values taken from Australian ADI List, Dec 2003.*

No special equipment is usually needed when occasionally handling small quantities. The following instructions are for bulk handling or where regular exposure in an occupational setting occurs without proper containment systems.

**Ventilation:** No special ventilation requirements are normally necessary for this product. However make sure that the work environment remains clean and that vapours and mists are minimised.

**Eye Protection:** Protective eyewear is not normally necessary when using this product. However, it is always prudent to use protective eyewear.

**Skin Protection:** Impermeable protective gloves should be worn when you are using this product, since absorption through the skin is harmful. Clothing: This product is essentially safe to use without special protective clothing. However, its use is recommended as a good industrial practice. Clean overalls or protective clothing should be worn, preferably with an apron.

**Protective Material Types:** There is no specific recommendation for any particular protective material type. Consult AS2919 for advice on Industrial Clothing.

**Respirator:** It is usually safe to not use a dust mask or respirator protection on account of this product. However, if the product is being used in dusty or confined conditions, use of a mask or respirator may be preferred.

Always wash hands before smoking, eating or using the toilet. Wash contaminated clothing and other protective equipment before storing or re-using.

## Section 9 - Physical and Chemical Properties:

<b>Physical Description &amp; colour:</b>	Clear amber liquid
<b>Odour:</b>	Characteristic odour
<b>Boiling Point:</b>	Solvent boils at 183-210°C
<b>Melting Point:</b>	n/a - liquid at room temperature
<b>Flash Point:</b>	64°C
<b>Volatiles:</b>	No specific data. Expected to be low at 100°C.
<b>Vapour Pressure:</b>	No data
<b>Vapour Density:</b>	No data.

### MATERIAL SAFETY DATA SHEET

Specific Gravity:	1.07
Water Solubility:	Emulsifiable
Volatility:	No data.
Odour Threshold:	No data.
Evaporation Rate:	No data.
Auto ignition temp:	No data
Corrosiveness:	Not corrosive

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## Section 10 - Stability and Reactivity

**Reactivity:** This product is unlikely to react or decompose under normal storage conditions.

**Conditions to Avoid:** Heat, flames, ignition sources and incompatibles

**Incompatibilities:** Strong acids, strong bases, strong oxidising agents.

**Fire Decomposition:** Carbon dioxide, and if combustion is incomplete, carbon monoxide and smoke. Oxides of phosphorus, water.

**Polymerisation:** This product is unlikely to undergo polymerisation processes.

**Unusual Fire & Explosion Hazards:** Fire decomposition products from this product may form toxic and corrosive mixtures in confined spaces. Vapours from this product are heavier than air and may accumulate in sumps, pits and other low-lying spaces, forming potentially explosive mixtures. They may also flash back considerable distances.

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## Section 11 - Toxicological Information

Toxic. Ingestion may result in nausea, vomiting, abdominal pain, diarrhea, fatigue, and profuse sweating and/or salivation. Large doses may result in breathing difficulties, muscle spasms and convulsions.

Aspiration may result in chemical pneumonitis.

**Toxicity Data MALATHION (121-75-5)**

LD<sub>50</sub> Oral (Rat) = 1375-2800mg/kg

LD<sub>50</sub> Oral (Mouse) = 775-3320mg/kg

LD<sub>50</sub> Dermal (Rabbit) = 4100mg/kg

LD<sub>50</sub> Oral (Cattle) = 500mg/kg

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## Section 12 - Ecological Information

Organophosphates are highly toxic to birds, mammals and fish. Bioaccumulation is unlikely as these chemicals would kill the organism before it would be taken into the tissues. Even when these chemicals are taken up by fish, they seldom persist for more than a week.

**Aquatic Toxicity:** Highly toxic to fish LC<sub>50</sub> (48 hr, rainbow trout) 0.1mg/L

**Terrestrial Toxicity** Highly toxic to birds LC<sub>50</sub> (5 day, bobwhite quail) 3497mg/kg LC<sub>50</sub> (5 day, ring-necked pheasant) 4320mg/kg

**Bees:** Toxic to bees: LD<sub>50</sub> 0.71µg/bee

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## Section 13 - Disposal Considerations

**Disposal:** Instructions for the disposal of containers is found on the product label.

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## Section 14 - Transport Information

This product is classed as UN3082, Dangerous Goods Class 9 Miscellaneous Dangerous Goods. Proper Shipping name is ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.. Class 9 Miscellaneous Dangerous Goods shall not be loaded in the same vehicle or packed in the same freight container with Classes 1 (Explosives), 5.1 (Oxidising Agents where the Miscellaneous Dangerous Goods are Fire Risk Substances), 5.2 (Organic Peroxides where the Miscellaneous Dangerous Goods are Fire Risk Substances). They may however be loaded in the same vehicle or packed in the same freight container with Classes 2.1 (Flammable Gases), 2.2 (Non-Flammable, Ton-Toxic Gases), 2.3 (Poisonous Gases), 3 (Flammable liquids), 4.1 (Flammable Solids), 4.2 (Spontaneously Combustible Substances), 4.3 (Dangerous When Wet Substances), 5.1 (Oxidising Agents except where the Miscellaneous Dangerous Goods are Fire Risk Substances), 5.2 (Organic Peroxides except where the Miscellaneous Dangerous

Goods are Fire Risk Substances), 6 (Poisonous Substances), 7 (Radioactive Substances), 8 (Corrosive Substances), Foodstuffs and foodstuff empties.

## Section 15 - Regulatory Information

**AICS:** All of the significant ingredients in this formulation are to be found in the public AICS Database. Malathon is mentioned in the SUSDP.

## Section 16 - Other Information

**This MSDS contains only safety-related information. For other data see product literature.**

### Acronyms:

<b>ADG Code</b>	Australian Code for the Transport of Dangerous Goods by Road and Rail
<b>AICS</b>	Australian Inventory of Chemical Substances
<b>ASCC</b>	National Occupational Health and Safety Commission
<b>CAS number</b>	Chemical Abstracts Service Registry Number
<b>Hazchem Number</b>	Emergency action code of numbers and letters that provide information to emergency services especially fire-fighters
<b>IARC</b>	International Agency for Research on Cancer
<b>NOS</b>	Not otherwise specified
<b>NTP</b>	National Toxicology Program (USA)
<b>R-Phrase</b>	Risk Phrase
<b>SUSDP</b>	Standard for the Uniform Scheduling of Drugs & Poisons
<b>UN Number</b>	United Nations Number

*THIS MSDS SUMMARISES OUR BEST KNOWLEDGE OF THE HEALTH AND SAFETY HAZARD INFORMATION OF THE PRODUCT AND HOW TO SAFELY HANDLE AND USE THE PRODUCT IN THE WORKPLACE. EACH USER MUST REVIEW THIS MSDS IN THE CONTEXT OF HOW THE PRODUCT WILL BE HANDLED AND USED IN THE WORKPLACE.*

*IF CLARIFICATION OR FURTHER INFORMATION IS NEEDED TO ENSURE THAT AN APPROPRIATE RISK ASSESSMENT CAN BE MADE, THE USER SHOULD CONTACT THIS COMPANY SO WE CAN ATTEMPT TO OBTAIN ADDITIONAL INFORMATION FROM OUR SUPPLIERS*

*OUR RESPONSIBILITY FOR PRODUCTS SOLD IS SUBJECT TO OUR STANDARD TERMS AND CONDITIONS, A COPY OF WHICH IS SENT TO OUR CUSTOMERS AND IS ALSO AVAILABLE ON REQUEST.*

Please read all labels carefully before using product.

This MSDS is prepared in accord with the ASCC document "National Code of Practice for the Preparation of Material Safety Data Sheets" 2nd Edition [ASCC:2011(2003)]

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