

# Material Safety Data Sheet



PRODUCT NAME           **ChemAg Cypershield 200 Insecticide**  
APVMA Product Code:   48451

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## 1 - IDENTIFICATION OF CHEMICAL PRODUCT AND COMPANY

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**Supplier Name**           **IMTRADE AUSTRALIA PTY LTD**  
**Address**                   17 Ocean Street, Kwinana, Western Australia, AUSTRALIA, 6167  
**Telephone**               (08) 9419 0333  
**Fax**                       (08) 9419 7516  
**Emergency**              In a Transport Emergency Dial 000 – Police or Fire Brigade  
**Email**                     sales@imtrade.com.au  
**Web site**                 http://www.imtrade.com.au  
**Product Use:**            Agricultural insecticide for use as described on the product label.  
**Creation Date:**         **March, 2008**  
**This version issued:**   **First issue: March, 2008**  
**Product type:**         Cypermethrin is a pyrethroid derivative.

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## SECTION 2 - HAZARDS IDENTIFICATION

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### Statement of Hazardous Nature

This product is classified as: Xn, Harmful. Xi, Irritating. N, Dangerous to the environment. Hazardous according to the criteria of ASCC.

Not a Dangerous Good according to the Australian Dangerous Goods (ADG) Code. However, this is a C1 Combustible Liquid and for storage meets the definition of Dangerous Goods.

**Risk Phrases:** R22, R65, R36/38, R50/53. Harmful if swallowed. Harmful: May cause lung damage if swallowed. Irritating to eyes and skin. Very toxic to aquatic organisms, may cause long-term adverse effects to the aquatic environment.

**Safety Phrases:** S2, S20, S23, S36, S46, S60, S61, S24/25. Keep out of reach of children. When using, do not eat or drink. Do not breathe spray mists. Wear suitable protective clothing. If swallowed, contact a doctor or Poisons Information Centre immediately and show this MSDS or label. This material and its container must be disposed of as hazardous waste. Avoid release to the environment. Refer to special instructions/Safety Data Sheets. Avoid contact with skin and eyes.

**SUSDP Classification:** S6

**ADG Classification:** None allocated. Not a Dangerous Good under the ADG Code.

**UN Number:** None allocated

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### Emergency Overview

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**Physical Description & Colour:** Clear, amber liquid.

**Odour:** Characteristic hydrocarbon solvent odour.

**Major Health Hazards:** Symptoms of high dermal exposure include numbness, tingling, itching, burning sensation, loss of bladder control, incoordination, seizures, and possible death. Pyrethroids like cypermethrin may adversely affect the central nervous system. Symptoms of high-dose ingestion include nausea, prolonged vomiting, stomach pains, and diarrhoea which progresses to convulsions, unconsciousness, and coma. Cypermethrin is a slight skin or eye irritant, and may cause allergic skin reactions and facial skin numbness. This product is irritating to eyes and skin, harmful if swallowed, if aspirated, may cause lung damage.

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### Potential Health Effects

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See section 11 for Chronic exposure studies.

#### Inhalation:

**Short Term Exposure:** Available data indicates that this product is not harmful. However product may be mildly irritating, although unlikely to cause anything more than mild transient discomfort.

#### Skin Contact:

**Short Term Exposure:** This product causes skin numbness but further symptoms are not available. In addition product is a skin irritant. Symptoms may include itchiness and reddening of contacted skin. Other symptoms may also become evident, but all should disappear once exposure has ceased.

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Issued by: Imtrade Australia Pty Ltd

Phone: (08) 9419 0333

Poisons Information Centre: 13 1126 from anywhere in Australia, (0800 764 766 in New Zealand)

**Eye Contact:**

**Short Term Exposure:** This product is an eye irritant. Symptoms may include stinging and reddening of eyes and watering which may become copious. Other symptoms may also become evident. If exposure is brief, symptoms should disappear once exposure has ceased. However, lengthy exposure or delayed treatment may cause permanent damage.

**Ingestion:**

**Short Term Exposure:** Significant oral exposure is considered to be unlikely. Because of the low viscosity of this product, it may directly enter the lungs if swallowed, or if subsequently vomited. Once in the lungs, it is very difficult to remove and can cause severe injury or death. However, this product is an oral irritant. Symptoms may include burning sensation and reddening of skin in mouth and throat. Other symptoms may also become evident, but all should disappear once exposure has ceased.

**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/m <sup>3</sup> )	STEL (mg/m <sup>3</sup> )
Cypermethrin	52315-07-8	200g/L	not set	not set
Liquid hydrocarbon		645g/L	not set	not set
Other non hazardous ingredients	secret	to 100	not set	not set

This is a commercial product whose exact ratio of components may vary slightly. Minor quantities of other non hazardous ingredients are also possible.

The ASCC 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 may be equalled (but should not be exceeded) for no longer than 15 minutes and should not be repeated 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.

**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.

**Inhalation:** No first aid measures normally required. However, if inhalation has occurred, 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:** Wash gently and thoroughly with warm water (use non-abrasive soap if necessary) for 10-20 minutes or until product is removed. Under running water, remove contaminated clothing, shoes and leather goods (e.g. watchbands and belts) and completely decontaminate them before reuse or discard. If irritation persists, repeat flushing and seek medical attention.

**Eye Contact:** Immediately flush the contaminated eye(s) with lukewarm, gently flowing water for 20 minutes or until the product is removed, while holding the eyelid(s) open. Take care not to rinse contaminated water into the unaffected eye or onto the face. Obtain medical attention immediately. Take special care if exposed person is wearing contact lenses.

**Ingestion:** If swallowed, do NOT induce vomiting. Wash mouth with water and contact a Poisons Information Centre, or call a doctor.

**SECTION 5 - FIRE FIGHTING MEASURES**

**Fire and Explosion Hazards:** This product is classified as a C1 combustible product. There is no risk of an explosion from this product under normal circumstances if it is involved in a fire. Violent steam generation or eruption may occur upon application of direct water stream on hot liquids. 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.

Fire decomposition products from this product may be toxic if inhaled. Take appropriate protective measures.

**Extinguishing Media:** Suitable extinguishing media are 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:** >61°C

**Upper Flammability Limit:** No data.

**Lower Flammability Limit:** No data.

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**Autoignition temperature:** No data.

**Flammability Class:** C1

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## SECTION 6 - ACCIDENTAL RELEASE MEASURES

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**Accidental release:** In the event of a major spill, prevent spillage from entering drains or water courses. Wear full protective clothing including eye/face protection. All skin areas should be covered. See below under Personal Protection regarding Australian Standards relating to personal protective equipment. Suitable materials for protective clothing include rubber, PVC. Eye/face protective equipment should comprise as a minimum, protective goggles. If there is a significant chance that vapours or mists are likely to build up in the cleanup area, we recommend that you use a respirator. It should be fitted with a type G cartridge, suitable for agricultural chemicals. Otherwise, not normally necessary.

Stop leak if safe to do so, and contain spill. Absorb onto sand, vermiculite or other suitable absorbent material. If spill is too large or if absorbent material is not available, try to create a dike to stop material spreading or going into drains or waterways. Sweep up and shovel or collect recoverable product into labelled containers for recycling or salvage, and dispose of promptly. Recycle containers wherever possible after careful cleaning. Refer to product label for specific instructions. After spills, wash area preventing runoff from entering drains. If a significant quantity of material enters drains, advise emergency services. Full details 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. Ensure legality of disposal by consulting regulations prior to disposal. Thoroughly launder protective clothing before storage or re-use. Advise laundry of nature of contamination when sending contaminated clothing to laundry.

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## SECTION 7 - HANDLING AND STORAGE

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**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:** Note that this product is combustible and therefore, for Storage, meets the definition of Dangerous Goods in some states. If you store large quantities (tonnes) of such products, we suggest that you consult your state's Dangerous Goods authority in order to clarify your obligations regarding their storage.

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 "Incompatibilities" in Section 10. Some liquid preparations settle or separate on standing and may require stirring before use. Check packaging - there may be further storage instructions on the label.

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## SECTION 8 - EXPOSURE CONTROLS AND PERSONAL PROTECTION

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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**.

**ASCC Exposure Limits**                      **TWA (mg/m<sup>3</sup>)**                      **STEL (mg/m<sup>3</sup>)**

Exposure limits have not been established by ASCC for any of the significant ingredients in this product.

The ADI for Cypermethrin is set at 0.05mg/kg/day. The corresponding NOEL is set at 5mg/kg/day. ADI means Acceptable Daily Intake and NOEL means No-observable-effect-level. Values taken from Australian ADI List, Dec 2006.

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 glasses or goggles should be worn when this product is being used. Failure to protect your eyes may cause them harm. Emergency eye wash facilities are also recommended in an area close to where this product is being used.

**Skin Protection:** Prevent skin contact by wearing impervious gloves, clothes and, preferably, apron. Make sure that all skin areas are covered. See below for suitable material types.

**Protective Material Types:** We suggest that protective clothing be made from the following materials: rubber, PVC.

**Respirator:** Usually, no respirator is necessary when using this product. However, if you have any doubts consult the Australian Standard mentioned above. Otherwise, not normally necessary.

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

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**SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES:**

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<b>Physical Description &amp; colour:</b>	Clear, amber liquid.
<b>Odour:</b>	Characteristic hydrocarbon solvent odour.
<b>Boiling Point:</b>	>100°C at 100kPa
<b>Freezing/Melting Point:</b>	No specific data. Liquid at normal temperatures.
<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.
<b>Specific Gravity:</b>	0.90
<b>Water Solubility:</b>	Emulsifiable.
<b>pH:</b>	No data.
<b>Volatility:</b>	No data.
<b>Odour Threshold:</b>	No data.
<b>Evaporation Rate:</b>	No data.
<b>Coeff Oil/water Distribution:</b>	No data
<b>Autoignition temp:</b>	No data.

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**SECTION 10 - STABILITY AND REACTIVITY**

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**Reactivity:** This product is unlikely to react or decompose under normal storage conditions. However, if you have any doubts, contact the supplier for advice on shelf life properties.

**Conditions to Avoid:** Store in the closed original container in a dry, cool, well-ventilated area out of direct sunlight.

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

**Fire Decomposition:** Carbon dioxide, and if combustion is incomplete, carbon monoxide and smoke. Water. Carbon monoxide poisoning produces headache, weakness, nausea, dizziness, confusion, dimness of vision, disturbance of judgment, and unconsciousness followed by coma and death.

**Polymerisation:** This product will not undergo polymerisation reactions.

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**SECTION 11 - TOXICOLOGICAL INFORMATION**

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**Toxicity:** An information profile for Cypermethrin is available at <http://extoxnet.orst.edu/pips/ghindex.html>

**Chronic toxicity:** Not Available

**Reproductive effects:** No adverse effects on reproduction were observed in a three-generation study with rats given doses of 37.5 mg/kg/day, the highest dose tested.

**Teratogenic effects:** Cypermethrin is not teratogenic. No birth defects were observed in the offspring of rats given doses as high as 70 mg/kg/day nor in the offspring of rabbits given doses as high as 30 mg/kg/day.

**Mutagenic effects:** Cypermethrin is not mutagenic, but tests with very high doses on mice caused a temporary increase in the number of bone marrow cells with micronuclei. Other tests for mutagenic effects in human, bacterial, and hamster cell cultures and in live mice have been negative.

**Carcinogenic effects:** EPA has classified cypermethrin as a possible human carcinogen because available information is inconclusive. It caused benign lung tumours in female mice at the highest dose tested (229 mg/kg/day); however, no tumours occurred in rats given high doses of up to 75 mg/kg/day.

**Organ toxicity:** Pyrethroids like cypermethrin may cause adverse effects on the central nervous system. Rats fed high doses (37.5 mg/kg) of the cis-isomer of cypermethrin for five weeks exhibited severe motor incoordination, while 20 to 30% of rats fed 85 mg/kg died 4 to 17 days after treatment began. Long-term feeding studies have shown increased liver and kidney weights and adverse changes in liver tissues in test animals. Pathological changes in the cortex of the thymus, liver, adrenal glands, lungs, and skin were observed in rabbits repeatedly fed high doses of cypermethrin.

**Fate in humans and animals:** In humans, urinary excretion of cypermethrin metabolites was complete 48 hours after the last of five doses of 1.5 mg/kg/day. Studies in rats have shown that cypermethrin is rapidly metabolized by hydroxylation and cleavage, with over 99% being eliminated within hours. The remaining 1% becomes stored in body fat. This portion is eliminated slowly, with a half-life of 18 days for the cis-isomer and 3.4 days for the trans-isomer.

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**SECTION 12 - ECOLOGICAL INFORMATION**

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Very toxic to aquatic organisms, may cause long-term adverse effects to the aquatic environment. This product is not biodegradable; it may accumulate in the soil or water and cause long term problems.

**Effects on birds:** Cypermethrin is practically non-toxic to birds. No adverse reproductive effects occurred in mallards or bobwhite quail given 50 ppm, the highest dose tested.

**Effects on aquatic organisms:** Cypermethrin is very highly toxic to fish and aquatic invertebrates. Cypermethrin is metabolized and eliminated significantly more slowly by fish than by mammals or birds, which may explain this compound's higher toxicity in fish compared to other organisms. The half-lives for elimination of several pyrethroids by trout are all greater than 48 hours, while elimination half-lives in birds and mammals range from 6 to 12 hours. The bioconcentration factor for cypermethrin in rainbow trout was 1200 times the ambient water concentration, indicating

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that there is a moderate potential to accumulate in aquatic organisms. Elimination of half of the accumulated amount of the compound took nearly eight days.

**Effects on other organisms:** Cypermethrin is highly toxic to bees.

**Environmental Fate:**

**Breakdown in soil and groundwater:** Cypermethrin has a moderate persistence in soils. Under laboratory conditions, cypermethrin degrades more rapidly on sandy clay and sandy loam soils than on clay soils, and more rapidly in soils low in organic material. In aerobic conditions, its soil half-life is 4 days to 8 weeks. Cypermethrin is not soluble in water and has a strong tendency to adsorb to soil particles. It is therefore unlikely to cause groundwater contamination.

**Breakdown in water:** In neutral or acid aqueous solution, cypermethrin hydrolyses slowly, with hydrolysis being more rapid at pH 9 (basic solution). Under normal environmental temperatures and pH, cypermethrin is stable to hydrolysis with a half-life of greater than 50 days and to photodegradation with a half-life of greater than 100 days. In pond waters and in laboratory degradation studies, pyrethroid concentrations decrease rapidly due to sorption to sediment, suspended particles and plants. Microbial degradation and photodegradation also occur.

**Breakdown in vegetation:** When applied to strawberry plants, 40% of the applied cypermethrin remained after one day, 12% remained after three days, and 0.5% remained after seven days, with a light rain occurring on day 3. When cypermethrin was applied to wheat, residues on the wheat were 4 ppm immediately after spraying and declined to 0.2 ppm 27 days later. No cypermethrin was detected in the grain.

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### SECTION 13 - DISPOSAL CONSIDERATIONS

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**Disposal:** Special help is available for the disposal of Agricultural Chemicals. The product label will give general advice regarding disposal of small quantities, and how to cleanse containers. However, for help with the collection of unwanted rural chemicals, contact ChemClear 1800 008 182 <http://www.chemclear.com.au/> and for help with the disposal of empty drums, contact DrumMuster <http://www.drummuster.com.au/> where you will find contact details for your area.

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### SECTION 14 - TRANSPORT INFORMATION

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**ADG Code:** This product is not classified as a Dangerous Good. No special transport conditions are necessary unless required by other regulations.

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### SECTION 15 - REGULATORY INFORMATION

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**AICS:** All of the significant ingredients in this formulation are compliant with NICNAS regulations. The following ingredients: Cypermethrin, Liquid hydrocarbon, are mentioned in the SUSDP.

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### SECTION 16 - OTHER INFORMATION

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**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 (7 <sup>th</sup> edition)
<b>AICS</b>	Australian Inventory of Chemical Substances
<b>ASCC</b>	Office of the Australian Safety and Compensation Council
<b>CAS number</b>	Chemical Abstracts Service Registry Number
<b>IARC</b>	International Agency for Research on Cancer
<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 on the product, and how to safely handle and use the product in the workplace. Each user should read this MSDS and consider the information in the context of how the product will be handled and used in the workplace, including in conjunction with other products. If clarification or further information is needed to ensure that an appropriate risk assessment can be made the user should contact Imtrade Australia Pty Ltd, or in the event of an emergency, 000. 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 [NOHSC:2011(2003)]

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End of Report

## MATERIAL SAFETY DATA SHEET