	Material Safety Data Sheet - MSDS CYPERMIL POUR ON / OPGIETDIP	UNIT: CRAVINHOS BUILDING: H DIVISION OF PESTICIDES
	OPERATION: SECURITY	
	DOC Nº: FI-SEG-GE-011	
REV. Nº: 01	VERSION DATE: MAR 22, 2007	AREA: PRODUCTION
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1 – Product and company identification

Product Name: **CYPERMIL POUR ON / OPGIETDIP**

Supplier

Name: **OURO FINO SAÚDE ANIMAL**
Address: Rodovia Anhanguera, SP 330, km 298 - Distrito Industrial
Cravinhos / SP – Brasil
Telephone number: 55 16 3518-2000

2 – Composition / Information on ingredients

PREPARATION

Chemical nature: The active ingredient is a member of the pyrethroid chemical family.

Class: Ectoparasiticide. For external use on animals only.

Components contributing to the hazard:	Components	CAS	Concentration range
	Cypermethrin	52315-07-8	5.0%
	2,6-Di-tert-Butyl-p-Cresol	128-37-0	0.2 a 2.0%
	Nonylphenol ethoxylated	26027-38-3	1.0 to 10.0%

3 – Hazards identification

Most important hazards: The skin contact may cause parasthesia (a stinging or burning sensation on the skin).

Effects of the product

Environmental effects: This substance may be hazardous in the environment.

Specific hazards: When heated to decomposition it emits toxic fumes including hydrogen cyanide, hydrogen chloride and nitrogen oxide.

Main symptoms: May cause parasthesia (a stinging or burning sensation on the skin), epigastric pain, nausea, vomiting, dizziness and muscular fasciculations. More severe poisoning may cause hypersalivation, altered mental status, weakness, loss of consciousness, seizures, coma and pulmonary edema.


4 – First-aid measures

Inhalation: Remove to fresh air. Get medical attention.

Skin contact: Remove contaminated clothes and shoes. Wash exposed skin with plenty of water and soap. If irritation occurs, get medical attention.

Eye contact: First check the victim for contact lenses and remove if present. Irrigate exposed eyes with copious amounts of room temperature water for at least 15 minutes, hold eyelid open while flushing. If irritation, pain or lacrimation, occur, get medical attention.

Ingestion: Do not induce vomiting. Give 2 or 3 glasses of water. In case of vomiting, to keep the head below of the level of the hips or in lateral position, if the individual will be lying, to prevent aspiration of the gastric content. Seek medical attention.

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Notes to a physician:

Life supportive procedures and symptomatic treatment. There are no specific antidotes.

Vitamin E topical application is highly effective in relieving paresthesias.

Patients with large oral ingestions of the product should be treated with a single standard dose of activated charcoal.

5 – Fire-fighting measures

Suitable extinguishing media: Use carbon dioxide, foam or dry chemical. Cool fire exposed containers with water.

Not suitable extinguishing media: Do not use direct water jet.

Specific hazards: Avoid open flames, sparks, smoking.

Protection of firefighters: Wear full protective clothing and self-contained breathing apparatus.

6 – Accidental release measures

Personal precautions: Use personal protective equipment (PPE). Avoid breathing vapors. Do not handle broken packages unless wearing appropriate personal protective equipment.

Environmental precautions: In case of spill or leak, contain spill immediately and remove all sources of ignition. Do not allow spill to enter sewers or watercourses.

Clean up methods: Absorb with appropriate material, collect material in specially market, tightly closing containers. Spilled product cannot be used further and must be disposed of.

7 – Handling and storage

Handling

Technical measures: Use personal protective equipment (PPE).

Precautions: Avoid contact with the product.

Storage

Technical measures: Store in a cool, dry, well ventilated place. Well closed. Store away from all sources of ignition.

Storage conditions: Store the product away from sunlight and excessive humidity. Keep out of reach of children and domestic animals. Do not store the product together with food, drink, domestic or personal hygiene products.

Incompatible products: Not determined.

Recommended packaging materials: High-density polyethylene (HDPE). Low-density polyethylene (LDPE).

8 – Exposure control / Personal protection

Engineering measures: Provide local ventilation when manufacturing product.


Control parameters

Occupational Exposure Limits: Cypermethrin: Not established by ACGIH, 2006.
2,6-Di-tert-Butyl-p-Cresol: 2 mg/m³ TLV-TWA (ACGIH, 2006).

Personal protective equipment

Respiratory protection: Face mask.

Hand protection: Impermeable gloves (e.g. neoprene or nitrile).

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Eye protection:	Safety glasses.
Skin and body protection:	Protective clothing with long sleeved shirts and long pants, rubber boots and head covering.
Hygiene measures:	Do not eat, drink or smoke during handling this material. Clean hands and face at work intervals and after work. Shower and change clothing at the end of the workday. Wash exposed parts of the body before eating, drinking and after dealing with the product.

9 – Physical and chemical properties

Physical State:	Clear liquid.
Color:	Yellow to light brown.
Odor:	Not determined.
pH:	Not determined.
Boiling point/range:	Not determined.
Flash Point:	Not applicable.
Explosion Properties:	Not determined.
Density:	Cypermethrin: 1.25 g/cm ³ at 20°C (HSDB, 2002).
Solubility:	Cypermethrin: Insoluble in water; Soluble in methanol, acetone, xylene, methylene dichloride (O' NEIL et al., 2001).
Vapour pressure:	Cypermethrin: 3.07x10 ⁻⁹ mmHg at 20°C (HSDB, 2002).

10 – Stability and reactivity

Stability:	Stable under standard conditions.
Hazardous reactions:	Not determined.
Materials to avoid:	Strong oxidants.
Hazardous decomposition products:	When heated to decomposition it emits toxic fumes including hydrogen cyanide, hydrogen chloride and nitrogen oxide.

11 – Toxicological Information


Acute toxicity:	LD ₅₀ rat dermal > 6,000 mg/kg b.w (TECPAR, 2005a).
Local effects:	Non-irritant to the eyes – rabbit (TECPAR, 2005b).

12 – Ecological Information

Environmental effects	
Mobility:	Cypermethrin was found to be immobile in all soils.
Environmental impact:	May be hazardous in the environment. Cypermethrin is relatively toxic to fish and bees.

13 – Disposal Considerations

Product and waste disposal methods:	Disposal should be in accordance with local, state or national legislation.
Packaging:	Do not reuse empty packing. The inadequate destination of the empty packing and waste of products in the environment cause contamination of the soil, water and air, harming fauna, flora and the health of the people.

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14 – Transport information

Road (Brazil)	Not dangerous goods. <i>*Decreto n°. 96.044 de 18 de maio de 1988. Resolução n° 420 de 12 de fevereiro de 2004.</i>
Sea	Not dangerous goods. <i>*IMDG Code 2004 (IMO – International Maritime Organization).</i>
Air	Not dangerous goods. <i>*DGR IATA 48th Edition, 2007 (Dangerous Goods Regulations – International Air Transport Association).</i>


15 – Regulatory Information

This Material Safety Data Sheet (MSDS) was prepared in accordance with ISO 11014-1.

16 – Other Information

The data given here is based on current knowledge and experience. The purpose of this Safety Data Sheet is to describe the products in terms of their safety requirements. The data does not signify any warranty with regard to the products' properties. It is the user's responsibility to ensure that its activities comply with Federal, State and Local laws.

Literature reference:	AMERICAN CONFERENCE OF GOVERNMENTAL INDUSTRIAL HYGIENISTS (ACGIH). Limites de Exposição (TLVs®) para Substâncias Químicas e Agentes Físicos & Índices Biológicos de Exposição (BEIs®) . São Paulo: [s.n.], 2006. Translation: Associação Brasileira de Higienistas Ocupacionais (ABHO). Database PLANITOX – The Science-based Toxicology Company. INSTITUTO DE TECNOLOGIA DO PARANÁ (TECPAR). Acute Dermal Toxicity . Curitiba, PA, 2005a. Technical report n° 05012449. Unpublished. Document assigned by Ouro Fino Saúde Animal Company. INSTITUTO DE TECNOLOGIA DO PARANÁ (TECPAR). Ocular Irritation Test . Curitiba, PA, 2005b. Technical report n° 05008994. Unpublished. Document assigned by Ouro Fino Saúde Animal Company. OURO FINO SAÚDE ANIMAL. Especificação Técnica: Cypermil Pour On. Cravinhos, SP, 2006. N° Doc. ET-P&D-EPA-032. Unpublished. Document assigned by Ouro Fino Saúde Animal Company. TERRA, F. E. F. Bula: Cypermil Pour On - Uso Veterinário. Cravinhos, SP, [200-?]. Document assigned by Ouro Fino Saúde Animal Company. TERRA, F. E. F. Rótulo: Cypermil Pour On - Uso Veterinário. Cravinhos, SP, [200-?]. Document assigned by Ouro Fino Saúde Animal Company.
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O' NEIL, M. J.; SMITH, A.; HECKELMAN, P. E.; OBENCHAIN JR, J. R.; GALLIPEAU, J. A. R.; D' ARECCA, M. A. (Eds.). **The Merck Index: an encyclopedia of chemicals, drugs and biologicals**. 13th ed. Whitehouse Station: Merck & Co., Inc., 2001.

Abbreviations:

LD50 - Administered dose resulting in death to 50% of experimental Animals

TLV – Threshold Limit Values.

TWA - Time Weighted Average.

b.w. – Body weight