

# MATERIAL SAFETY DATA SHEET



## FRONTLINE® Spray

Version 2  
Issue Date: 13 May 2009  
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### SECTION 1 IDENTIFICATION OF THE MATERIAL AND SUPPLIER

Recommended use: For the treatment and prevention of flea infestations, control of flea allergy dermatitis, control of ticks (including paralysis ticks) and biting lice on dogs and cats.  
Do not use on rabbits.

Supplier name: Merial Australia Pty Ltd  
Address: Building D, 12-24 Talavera Road  
Macquarie Park NSW 2113

Telephone number (toll-free): 1800 808 691

All hours emergency phone number - Poisons Information Centre 131126 anywhere in Australia

### SECTION 2 HAZARDS IDENTIFICATION

**Not Classified as hazardous according to criteria of NOHSC.** Not classified as hazardous according to the National Occupational Health and Safety Commission's Approved Criteria for Classifying Hazardous Substances [NOHSC:1008(1999)].

**Classified as Dangerous Goods according to the ADG Code (Class 3 PG II - flammable liquid).**

**Risk phrase(s)** (Hazard): FLAMMABLE (R10)  
**Safety phrase(s)**:  
(Precautionary statements) KEEP OUT OF THE REACH OF CHILDREN (S2)  
AVOID CONTACT WITH SKIN OR EYES (S24/25)  
IN CASE OF CONTACT WITH EYES, RINSE IMMEDIATELY WITH  
PLENTY OF WATER AND CONTACT A DOCTOR OR POISONS  
INFORMATION CENTRE (S26).  
KEEP CONTAINER TIGHTLY CLOSED AND IN A WELL-VENTILATED  
PLACE. (S7/9)  
KEEP AWAY FROM SOURCES OF IGNITION - NO SMOKING (S16)  
USE ONLY IN A WELL VENTILATED AREA. (S51)  
DO NOT EMPTY INTO DRAINS (S29)  
TAKE PRECAUTIONARY MEASURES AGAINST STATIC DISCHARGES (S33)  
IF SWALLOWED, SEEK MEDICAL ADVICE IMMEDIATELY AND SHOW  
THE CONTAINER OR LABEL. (S46)  
IF SWALLOWED, RINSE THE MOUTH WITH WATER (ONLY IF PERSON  
IS CONSCIOUS). (S64)

APPROVED CRITERIA: CLASSIFICATION:

SUSDP CLASSIFICATION -

POISONS SCHEDULE: 5

ADG CODE CLASSIFICATION: Class 3 (Flammable liquid)

UN No. 1219 (See also Sections 14-16)

LOCAL EFFECTS OF PRODUCT:

TARGET ORGANS:

INHALATION: Harmful if vapour or spray is inhaled. May cause irritation to nose, throat and respiratory tract, lethargy or dizziness.

SKIN CONTACT: May cause irritation.

EYE CONTACT: Irritant. May cause burning, redness and swelling.

INGESTION: Harmful. May cause nausea, vomiting, abdominal pain,

CARCINOGEN STATUS: Not classified by NOHSC, NTP or IARC

### SECTION 3 COMPOSITION/INFORMATION ON INGREDIENTS

Ingredient	CAS No.	Content %	Classification	Risk phrase
Fipronil Technical	120068-37-3	0.25	Harmful Xn	R 20/21-36
Filming agent	confidential	<10	Not classified	-
Isopropanol	67-63-0	balance	Flammable	R 10



## SECTION 4 FIRST AID MEASURES

ADVICE:	For advice, contact a Poisons Information Centre (Phone 131 126 anywhere in Australia), or call a doctor at once.
INHALATION:	If vapour or mist inhaled, remove from contaminated area. If adverse effects occur, contact a doctor and show this MSDS.
SKIN CONTACT:	If skin or hair contact occurs, remove contaminated clothing and flush skin and hair with running water.
EYE CONTACT:	If in eyes, hold eyelids apart and flush the eye continuously with running water. Continue flushing until advised to stop by the Poisons Information Centre or a doctor, or for at least 15 minutes.
INGESTION:	If swallowed, do <b>NOT</b> induce vomiting. Follow instruction of Poisons Information Centre.
Notes to physician:	The active ingredient is a phenylpyrazole that disrupts normal nerve function by blocking GABA-gated chloride channels. The action is selectively toxic to insects.

## SECTION 5 FIRE FIGHTING MEASURES

FIRE AND EXPLOSION HAZARDS:	Flammable. Vapours form explosive mixtures in air. Vapours are heavier than air and can move to low areas.
EXTINGUISHING MEDIA:	Water spray/fog, dry chemical, CO <sub>2</sub> or alcohol-resistant foam.
FIRE FIGHTING:	
Special advice in case of fire:	Emergency workers should wear full protective equipment and supplied-air breathing apparatus. Toxic or irritant gases, vapours or particulates may be generated in a fire. Spray water on containers to cool. Contain contaminated fire-fighting water.
Hazardous products of combustion:	Oxides of carbon and nitrogen, various organic substances.

## SECTION 6 ACCIDENTAL RELEASE MEASURES

Emergency procedures. Initial Emergency response Guide: 16

If spill or leak is of significant quantity, move non-essential persons away. Remove any sources of ignition from area. Deploy fire-extinguisher nearby. Seal leak if safe to do so. Remove leaking packages to space with good ventilation of area and place in over-bin. Contain spill with absorbent material such as dry sand or kitty litter. Do not allow to enter drains or sewer. Sweep up used absorbent and pack in properly labelled container for disposal. To cleanse area, wet down contaminated area with a little water, cover with absorbent and sweep up and again place used absorbent in the labelled container. Consult waste authority regarding disposal.

**OCCUPATIONAL RELEASE:** As for accidental release. Wear impervious gloves and eye protection, to deal with a large spill or leak.

## SECTION 7 HANDLING AND STORAGE

SAFETY DIRECTIONS:	<b>May irritate the eyes and skin. Avoid contact with eyes and skin.</b> Wash hands after use. Keep away from foodstuffs and beverages. Do not eat, drink or smoke when using the product. Do not inhale vapours or mists.
HANDLING AND STORAGE:	Classified as Dangerous Goods of Class 3 PG II according to the Australian Dangerous goods Code 6 <sup>th</sup> edition. Surface transport must comply with the ADG Code. Special storage conditions may apply to a site if more than 100 L of the liquid is stored. Store and stow away from oxidising agents. Store in original container. Store below 30°C away from oxidising agents.
VENTILATION:	Store significant quantities where there is good natural ventilation.
SOURCES OF IGNITION:	Store away from sources of ignition such as power points, switches, motors, naked flames and spark-producing equipment. Consult AS 1020 for guidance on avoiding sparks from static electricity.



## SECTION 8 EXPOSURE CONTROLS/PERSONAL PROTECTION

No ingredients that require workplace atmosphere monitoring have been identified by the manufacturer  
EXPOSURE LIMITS:

NOHSC TWA = 983 mg/cu.m for isopropanol

NOHSC STEL= 1230 mg/cu.m for isopropanol

No exposure limits have been established for more toxic ingredients such as the active ingredient.

The Time Weighted Average (TWA) is the concentration of the substance in the worker's breathing zone, exposure to which over 8-hour days, 5-day weeks over a working lifetime, should not cause any undue discomfort or health impairment to nearly all workers. The Short Term Exposure Limit (STEL), means a 15 minute TWA exposure which should not be exceeded and should not be repeated within 60 minutes or more than four times per day.

### Exposure Controls / Industrial hygiene:

VENTILATION: Local exhaust extraction not required where there is good natural draft away from user.

RESPIRATOR: Not required for normal handling.

EYE PROTECTION: Not required for normal use. Avoid contact with eyes. Wear eye protection if there is likelihood of splashing.

SKIN PROTECTION: Not required for normal use, however, if used frequently or animals on which the product has been used are handled frequently, wear impervious gloves such as rubber. After each day's use, wash gloves.

### Personal Protective Equipment

EYE PROTECTION: If required as outlined above or if cleaning-up a large spill or leak, use chemical goggles complying with AS 1337 / 1337.

SKIN PROTECTION: If required as outlined above or if cleaning-up a large spill or leak, wear impervious gloves such as PVC coated cotton gloves complying with AS/NZS 2161.2.

## SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

Appearance	Amber liquid.
Odour.	Alcoholic
pH.	Not relevant
Boiling point/range.	82 ° C (isopropanol)
Freezing Point	Not determined
Melting point	Not determined
Solubility in water	Soluble in all proportions
Specific gravity or density.	0.859
Vapour pressure	43 hPa @ 20 ° C
Flash point	18 ° C.
Upper explosive limits in air	12%
Lower explosive limit	2%
Auto-ignition temperature.	425° C
Particle size.	Not relevant
Volatile organic compounds.	~70%
Viscosity.	Not determined
Octanol/water partition coefficient.	Not determined
Reactivity	Not an oxidising agent.
Dust explosion hazard.	Not relevant
Burning characteristics.	Flammable
Incompatible materials.	Strong oxidizing agents or peroxide formers.



## SECTION 10 STABILITY & REACTIVITY

Thermal decomposition:	Not expected at normal temperatures.
Dangerous reactions:	None known.
REACTIVITY:	Stable but readily oxidised by oxidising agents such as pool and spa chlorine, permanganates, chlorates and may catch fire in contact with them.
CONDITIONS TO AVOID:	Contact with any oxidising agent, strong acids and strong alkali. Incompatible with oxidising agents.
HAZARDOUS DECOMPOSITION:	No decomposition expected at normal temperatures.
POLYMERISATION:	No hazardous polymerisation will occur.

## SECTION 11 TOXICOLOGICAL INFORMATION

Does not contain heavy metals or halogenated compounds.

	Fipronil	Isopropanol
LD50 acute oral rat:	97 mg/kg	4570 mg/kg
LD50 acute dermal rat:	2000 mg/kg	13400 mg/kg
Inhalation (rabbit):	0.68 mg/L – 4 hr	30 mg/L
Skin irritation (rabbit):	Mild skin irritant	Not classified as irritant
Eye irritation (rabbit):	Eye irritant	Not classified as irritant
Sensitisation (guinea pig):	Not a sensitising agent	Not a sensitising agent
Genotoxicity	Not available	Not genotoxic

LOCAL EFFECTS OF PRODUCT:	Irritating to eyes skin.
TARGET ORGANS:	Eyes, skin, CNS.
HAZARDOUS INGREDIENTS:	Fipronil R-PHRASE 20/21-36 HARMFUL BY INHALATION AND IN CONTACT WITH SKIN
MUTAGENICITY DATA:	Not available
Subacute to chronic toxicity:	There are no data on the reproductive effects of this mixture. For Fipronil, the No Effect Level (NOEL) for adverse reproductive effects in rats was approximately 2.5 mg/kg-day, with higher doses causing adverse effects. Acute and chronic overexposure to bulk volumes of Technical Fipronil produced adverse neurological effects in animals (rabbits), including changes in neuromuscular endpoints and seizures.
Additional toxicological information:	Symptoms of respiratory depression or central nervous system depression (fatigue, lethargy or dizziness) may occur if exposed to bulk volumes of ingredients. This product is a veterinary medicine and should be regarded as harmful if swallowed or absorbed.

## SECTION 12 ECOLOGICAL INFORMATION

	Information applies to the <b>Fipronil</b> active ingredient, not the product.	
Environmental fate:	Not available	
Biological elimination:	Not available	
Bioaccumulation potential:	Not available	
Mobility:	Not available	
TOXICITY TO FISH:	Rainbow Trout LC50 0.25 mg/L/24hr - poisonous to fish.	
TOXICITY TO DAPHNIA:	190 :g/L	EC50 48 hr ( <i>D. magna</i> )
TOXICITY TO ALGA:	not available	
TOXICITY TO BACTERIA:	IC50 (respiration) not available	
READY BIODEGRADABILITY:	Not available	



## SECTION 13 DISPOSAL CONSIDERATIONS

### Special precautions:

As the active ingredient is highly toxic to aquatic organisms, great care is needed to ensure that the product does not reach a drain, waterway or unpaved soil. Empty containers may be disposed of by wrapping in absorbent paper and disposal to garbage. For the disposal of the clean-up materials from a significant spill or leak, consult waste authority.

## SECTION 14 TRANSPORT INFORMATION

### Surface transport:

UN Number	1219
UN Proper Shipping Name	Isopropanol
Class and subsidiary risk	3 (no sub-risk)
Packing Group	II
Special precautions for user	SP144 SP184
Hazchem Code	2[Y]
Labelling:	Transport packaging to comply with ADG Code labelling requirements for Class 3 PG II DG.
Transport as :	DG of Class 3 PG II
Incompatible stowage:	Do not stow with DG of Class 1, Class 2.3, Class 4.2, Class 5.1, Class 5.2 or Class 7

### Maritime transport:

UN Number	1219
UN Proper Shipping Name	Isopropanol
Class and subsidiary risk	3.3 (no sub-risk)
Packing Group	II
IMDG Page:	3244

### Air transport ICAO-TI and IATA-DGR:

UN Number	1219
UN Proper Shipping Name	Isopropanol
Class and subsidiary risk	3 (no sub-risk)
Packing Group	II

## SECTION 15 REGULATORY INFORMATION

This product is registered with the Australian Pesticides & Veterinary Medicines Authority; APVMA Approval number: 46828.

Consult Australian Standard AS 1940 for guidance regarding storage facilities for DG of Class 3.

## SECTION 16 OTHER INFORMATION

Keep treated animals away from fires and other sources of heat for at least 30 minutes following spraying and until the coat is totally dry. Do not apply to isopropanol (alcohol) sensitive surfaces.

### Classification for storage requirements of AS 1940.

As the Closed flash point is less than 23 deg.C, the classification of "Class 3 flammable liquid" may need to be taken into account for compliance with AS 1940.

Do not allow product to reach ground water, water course or sewage system. Poisonous to fish and plankton.



**ACRONYMS USED IN THIS MSDS**

SUSDP	Standard for the Uniform scheduling of Drugs and Poisons
ADG Code	Australian Dangerous Goods (DG) Code
CAS No.	Chemical Abstracts number
UN No.	United Nations identifying number for DG
R-phrases	Risk phrases identifying main hazard of ingredient or product
S-phrases	Safety phrases identifying main safety measures to be used
NOHSC	National Occupational Health and Safety Commission
NTP	National Toxicology Programme (USA)
IARC	International Agency for Research on Cancer
AICS	Australian Inventory of Chemical Substances
HAZCHEM	Code for information for emergency services

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**SUPPLIER STATEMENT:** *The product should be stored, handled and used in accordance with good industrial hygiene practices and in conformity with legal regulations.. The information in this MSDS is based on the level of knowledge at the time of preparation and relates to the product in the state in which it is supplied. The information describes the product from the safety point of view and is not intended to guarantee any particular properties and shall not establish a legally valid contractual relationship*