Material Safety Data Sheet

ISO/DIS 11014 / 29 CFR 1910.1200 / ANSI Z400.1

Printing date 10/23/2001 Reviewed on 10/23/2001

1 Identification of substance

· **Product details**

· **Trade name:** **Fipronil 0.29% w/w**
Frontline® Spray Treatment

· **Product number:** 2818, 2842

· **Manufacturer/Supplier:**
Merial Limited
2100 Ronson Road
Iselin, NJ 08830-3077
1-888-MERIAL 1 (1-888-637-4251), Option 5

· **Emergency information:**
Spill Information:
CHEMTREC® 1-800-424-9300
CHEMTREC® International 1+703-527-3887
Reverse charges.
Health Information: 1-888-637-4251, Option 5

2 Composition/Data on components

· **Chemical characterization**
· **Description:** Mixture: consisting of the following components.

· **Components:**

	%w/w		
	Non hazardous inert ingredients		26.71 %
67-63-0	Isopropanol	Xi, F; R 11-36-67	73.0%
120068-37-3	Fipronil Technical	Xn; R 20/21-36	0.29%

3 Hazards identification

· **Hazard description:**

F Highly flammable

· **Information pertaining to particular dangers for man and environment:**
R 11 Highly flammable.
· **Classification system:**
The classification was made according to the latest editions of international substances lists, and from company and regulatory data.
· **NFPA ratings (scale 0 - 4)**

Health = 1
Fire = 2
Reactivity = 0

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· **HMIS-ratings (scale 0 - 4)**

HEALTH 1	Health = 1
FIRE 2	Fire = 2
REACTIVITY 0	Reactivity = 0

4 First aid measures

· **General information:** No special measures required.
· **After inhalation:** Seek immediate medical advice.
· **After skin contact:** Immediately wash with water and soap and rinse thoroughly.
· **After eye contact:**
Rinse opened eye for a minimum of 15 minutes under running water. If symptoms occur, consult a doctor.
· **After swallowing:**
Immediately call a doctor.
Induce vomiting, if person is conscious. Seek medical help.
· **Information for doctor.**
The following symptoms may occur
In severe cases of overexposure by oral ingestion, lethargy, muscle tremors, and in extreme cases, possible convulsions may occur.

5 Fire fighting measures

· **Suitable extinguishing agents:**
CO_2, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
· **Special hazards caused by the material, its products of combustion or resulting gases:**
Nitrogen oxides (NO_x)
Carbon dioxide (CO_2)
Carbon monoxide (CO)
Hydrogen fluoride (HF)
Hydrogen chloride (HCl)
Smoke
Can form explosive gas-air mixtures.
· **Protective equipment:**
Fire fighters should wear self-contained breathing apparatus and full protective equipment.

6 Accidental release measures

· **Person-related safety precautions:**
Ensure adequate ventilation
Wear protective equipment. Keep unprotected persons away.
· **Measures for environmental protection:** Do not allow product to reach sewage system or any water course.
· **Measures for cleaning/collecting:**
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
Dispose contaminated material as waste according to section XIII.
Ensure adequate ventilation.

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7 Handling and storage

· **Handling:**
· **Information for safe handling:**
Store in cool, dry place in tightly closed containers.
Handle with care. Avoid jolting and impact.
Use only in well ventilated areas.
· **Information about protection against explosions and fires:**
Keep ignition sources away - Do not smoke.
Protect against electrostatic charges.

· **Storage:**
· **Requirements to be met by storerooms and receptacles:**
Store in a cool location.
Store only in the original container.
· **Information about storage in one common storage facility:** Not required.
· **Further information about storage conditions:**
Keep receptacle tightly sealed.
Store in a cool, dry, well ventilated place.
· **Recommended storage temperature:** < 30°C (86°F)

8 Exposure controls and personal protection

· **Components with limit values that require monitoring at the workplace:**

67-63-0 Isopropanol	
ACGIH TLV (USA)	Short-term value: (1230) mg/m³, (500) ppm Long-term value: (983) mg/m³, (400) ppm NIC, A 4
NIOSH REL (USA)	Short-term value: 1225 mg/m³, 500 ppm Long-term value: 980 mg/m³, 400 ppm
OSHA PEL (USA)	980 mg/m³, 400 ppm
MAK (Germany)	500 mg/m³, 200 ppm Y; (DFG)

· **Personal protective equipment:**
· **General protective and hygienic measures:**
Wash hands before breaks and at the end of work.
Avoid contact with the eyes and skin.
Do not eat, drink, smoke or inhale.
Do not store food in the working area.
· **Breathing equipment:** Wear mask with vapor cartridge when cleaning large spills.
· **Protection of hands:**

Protective gloves

· **Eye protection:** Wear eye protection when cleaning large spills.
· **Body protection:** Wear protective clothing when cleaning large spills.

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9 Physical and chemical properties

· **Form:**	Liquid
· **Color:**	Light amber colored
· **Odor:**	Like alcohol
· **Change in condition**	
Melting point/Melting range:	Undetermined.
Boiling point/Boiling range:	82°C (180°F)
· **Flash point:**	18°C (64°F)
· **Ignition temperature:**	425.0°C (797°F)
· **Auto igniting:**	Product will auto-ignite at 459ºC.
· **Danger of explosion:**	Product is not explosive. However, formation of explosive air/vapor mixtures are possible.
· **Vapor pressure at 20°C (68°F):**	43.0 hPa
· **Specific gravity at 20°C (68°F):**	0.859 g/cm³
· **Solubility in / Miscibility with Water:**	Soluble.
· **Solvent content:**	
Organic solvents:	73.0 %
· **Solids content:**	0.3 %

10 Stability and reactivity

· **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
· **Dangerous reactions** No dangerous reactions known.
· **Dangerous products of decomposition:** No dangerous decomposition products known.

11 Toxicological information

· **Acute toxicity:**

· **LD/LC50 values that are relevant for classification:**

67-63-0 Isopropanol		
Oral	LD50	4570 mg/kg (rat)
Dermal	LD50	13400 mg/kg (rabbit)
Inhalative	LC50/4 h	30 mg/l (rat)
120068-37-3 Fipronil Technical		
Oral	LD50	97 mg/kg (rat)
Dermal	LD50	2000 mg/kg (rat)
Inhalative	LC50/4 h	.68 mg/l (lap)

· **Primary irritant effect:**
· **on the skin:** No irritating effect known.
· **on the eye:** No irritating effect known.

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· **Sensitization:** *No sensitizing effects known.*

12 Ecological information

· **Ecotoxological effects:**

· **Acquatic toxicity:**

120068-37-3 Fipronil Technical	
EC50/48 hours	190 ug/l (daphnia magna)
LC50/8 days	>5000 mg/kg (mal)

· **General notes:**
Water hazard class 1 (Self-assessment): slightly hazardous for water
Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.
This product is toxic to aquatic organisms (fish and invertebrates). Cover, incorporate or clean-up product that is spilled during loading or are visible on soil surface in turn areas. Do not contaminate water when disposing or equipment wash.

13 Disposal considerations

· **Product:**
· **Recommendation:** *Incinerate at an EPA approved incinerator facility.*

· **Uncleaned packagings:**
· **Recommendation:** *Disposal must be made according to official regulations.*

14 Transport information

· **DOT regulations:**

· **Hazard class:** *3*
· **Identification number:** *UN1219*
· **Packing group:** *II*
· **Proper shipping name (technical name):** *Isopropanol (Isopropyl alcohol)*

· **Land transport ADR/RID (cross-border):**

· **ADR/RID class:** *3 Flammable liquids*
· **Item:** *3b*
· **Danger code (Kemler):** *33*
· **UN-Number:** *1219*

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· **Proper shipping name:**	1219 Isopropanol (Isopropyl alcohol)

· **Maritime transport IMDG:**

· **IMDG Class:**	3.2
· **Page:**	3268
· **UN Number:**	1219
· **Packaging group:**	II
· **EMS Number:**	3-05
· **MFAG:**	310,313
· **Marine pollutant:**	No
· **Proper shipping name:**	Isopropanol (Isopropyl alcohol)

· **Air transport ICAO-TI and IATA-DGR:**

· **ICAO/IATA Class:**	3
· **UN/ID Number:**	1219
· **Packing group:**	II
· **Proper shipping name:**	Isopropanol (Isopropyl alcohol)

15 Regulations

· **Sara**

· **Section 355 (extremely hazardous substances):**

None of the ingredients are listed.

· **Section 313 (Specific toxic chemical listings):**

67-63-0	Isopropanol

· **TSCA (Toxic Substances Control Act):**

67-63-0	Isopropanol

· **CA Proposition 65**

· **Chemicals known to cause cancer:**

None of the ingredients are listed.

· **Chemicals known to cause reproductive toxicity:**

None of the ingredients are listed.

· **Product related hazard informations:**
The product has been classified and marked in accordance with directives on hazardous materials.

· **Hazard symbols:**
F Highly flammable

· **Risk phrases:**
11 Highly flammable.

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· **Safety phrases:**
2 Keep out of the reach of children.
7/9 Keep container tightly closed and in a well-ventilated place.
16 Keep away from sources of ignition - No smoking.
29 Do not empty into drains.
46 If swallowed, seek medical advice immediately and show this container or label.
51 Use only in well-ventilated areas.

· **Water hazard class:** Water hazard class 1 (Self-assessment): slightly hazardous for water.

16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

· **Contact:** MSDS Coordinator, 706-552-2739, msds@merial.com

USA