



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 9.7% w/w
FRONTLINE® TOP SPOT™

· **Product number:**
2802, 2803, 2804, 2805, 2806, 2812, 2813, 2814, 2815, 2816, 2823, 2824, 2825, 2826, 2832, 2833, 2834, 2835, 2836, 2837

· **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:**

	Non hazardous inert ingredients		76.0 %
120068-37-3	Fipronil Technical	☒ Xn; R 20/21-36	9.7%
64-17-5	ethanol	☒ F; R 11	7.7%
9003-39-8	Polyvinylpyrrolidone	☒ Xn; R 20/22-36/37/38	6.0%
128-37-0	Butylhydroxytoluene	☒ Xi; R 36/38	0.3%
25013-16-5	Butylhydroxyanisole		0.3%

3 Hazards identification

· **Hazard description:** Not applicable.

· **Information pertaining to particular dangers for man and environment:**
R 10 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 = 0
Fire = 0
Reactivity = 0

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· HMIS-ratings (scale 0 - 4)

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

4 First aid measures

- **General information:** No special measures required.
- **After inhalation:** Supply fresh air; consult doctor in case of complaints.
- **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:** Induce vomiting, if person is conscious. Seek medical help.

5 Fire fighting measures

- **Suitable extinguishing agents:**
CO₂, extinguishing powder or water spray. Fight larger fire with alcohol resistant foam.
- **Protective equipment:**
Fire fighters should wear self-contained breathing apparatus and full protective equipment.

6 Accidental release measures

- **Person-related safety precautions:**
Not required.
Wear protective equipment. Keep unprotected persons away.
- **Measures for environmental protection:**
Inform respective authorities in case of seepage of large quantities into water source or sewage system.
- **Measures for cleaning/collecting:**
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
Do not flush with water or aqueous cleansing agents

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 only in the original container.
- **Information about storage in one common storage facility:** Not required.

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- **Further information about storage conditions:**
- **Recommended storage temperature:** < 30°C (86°F)

8 Exposure controls and personal protection

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

64-17-5 ethanol

ACGIH TLV (USA)	1880 mg/m ³ , 1000 ppm
NIOSH REL (USA)	1900 mg/m ³ , 1000 ppm
OSHA PEL (USA)	1900 mg/m ³ , 1000 ppm
MAK (Germany)	1900 mg/m ³ , 1000 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:** Not necessary if room is well-ventilated.
- **Protection of hands:**



Protective gloves

- **Eye protection:** Safety glasses
- **Body protection:** Light weight protective clothing

9 Physical and chemical properties

- **Form:** Liquid
- **Color:** Light amber colored
- **Odor:** Ester-like
- **Change in condition**
Melting point/Melting range: Undetermined.
Boiling point/Boiling range: 78°C (172°F)
- **Flash point:** 37°C (99°F)
- **Ignition temperature:** 190.0°C (374°F)
- **Auto igniting:** Product will autoignite at 215°C.
- **Danger of explosion:** Product is not explosive. However, formation of explosive air/vapor mixtures are possible.
- **Explosion limits:**
Lower: 1.2 Vol %
Upper: 11.6 Vol %
- **Vapor pressure at 20°C (68°F):** 0.1 hPa

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- | | |
|--|-----------------------------------|
| · Specific gravity: | Not determined. |
| · Solubility in / Miscibility with Water: | Not miscible or difficult to mix. |
| · Solvent content: | |
| Organic solvents: | 77.7 % |
| · Solids content: | 16.3 % |

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:**

Oral	LD50	2995 mg/kg (rat)
Dermal	LD50	>5000 mg/kg (rat)
Inhalative	LC50/4 h	>6.32 mg/l (rat)
111-90-0 Diethylene glycol monoethyl ether		
Oral	LD50	5500 mg/kg (rat)
Dermal	LD50	6000 mg/kg (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)
64-17-5 ethanol		
Oral	LD50	7060 mg/kg (rat)
Inhalative	LC50/4 h	20000 mg/l (rat)
9003-39-8 Polyvinylpyrrolidone		
Oral	LD50	100 mg/kg (rat)
128-37-0 Butylhydroxytoluene		
Oral	LD50	890 mg/kg (rat)

- **Primary irritant effect:**
- **on the skin:** No irritating effect known.
- **on the eye:** No irritating effect known.
- **Sensitization:** No sensitizing effects known.

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12 Ecological information

· **Ecotoxicological 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 2 (Self-assessment): hazardous for water

Do not allow bulk volumes of product to reach ground water, water source or sewage system.

Danger to drinking water if even small quantities leak into the ground.

13 Disposal considerations

· **Product:**

· **Recommendation:**

Smaller quantities can be disposed of with household waste.

After prior treatment product has to be landfilled or incinerated adhering to the regulations pertaining to the disposal of especially hazardous waste.

· **Uncleaned packagings:**

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

14 Transport information

· **DOT regulations:**



· **Hazard class:**

3

· **Identification number:**

UN1992

· **Packing group:**

III

· **Proper shipping name (technical name):** Flammable liquid, toxic, n.o.s., ethanol (Ethyl alcohol), fipronil

Technical

· **Remarks:**

Non-regulated

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



· **ADR/RID class:**

3 Flammable liquids

· **Item:**

32c

· **Danger code (Kemler):**

36

· **UN-Number:**

1992

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· **Proper shipping name:** 1992 Flammable liquid, toxic, n.o.s., ethanol (Ethyl alcohol), fipronil Technical

· **Maritime transport IMDG:**



· **IMDG Class:** 3.3
 · **Page:** 3346-1
 · **UN Number:** 1992
 · **Packaging group:** III
 · **EMS Number:** 3-03
 · **Marine pollutant:** No
 · **Proper shipping name:** Flammable liquid, toxic, n.o.s., ethanol (Ethyl alcohol), fipronil Technical

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



· **ICAO/IATA Class:** 3
 · **UN/ID Number:** 1992
 · **Packing group:** III
 · **Proper shipping name:** Flammable liquid, toxic, n.o.s., ethanol (Ethyl alcohol), fipronil Technical

15 Regulations

· **Sara**

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

None of the ingredients are listed.

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

None of the ingredients are listed.

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

111-90-0	Diethylene glycol monoethyl ether
64-17-5	ethanol
9003-39-8	Polyvinylpyrrolidone
128-37-0	Butylhydroxytoluene
25013-16-5	Butylhydroxyanisole

· **CA Proposition 65**

· **Chemicals known to cause cancer:**

25013-16-5	Butylhydroxyanisole
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· **Chemicals known to cause reproductive toxicity:**

None of the ingredients are listed.

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· **Product related hazard informations:**

The product has been classified and marked in accordance with directives on hazardous materials.

· **Risk phrases:**

10 Flammable.

· **Safety phrases:**

2 Keep out of the reach of children.

7 Keep container tightly closed.

16 Keep away from sources of ignition - No smoking.

29 Do not empty into drains.

43 In case of fire, use sand, carbon dioxide or powdered extinguishing agent. Never use water.

46 If swallowed, seek medical advice immediately and show this container or label.

· **Water hazard class:** Water hazard class 2 (Self-assessment): 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