

SAFETY DATA SHEET

Product Name: FRONTLINE Plus for Cats / FRONTLINE Plus for Dogs

Page 1 of 5
Reviewed on: 10 September, 2013

SECTION 1: IDENTIFICATION OF THE SUBSTANCE AND SUPPLIER

| | |
|------------------------------------|--|
| Product name: | FRONTLINE Plus for Cats / FRONTLINE Plus for Dogs |
| Product code: | A9008 / A9009 |
| Recommended use: | For the treatment, prevention and control of flea, tick and biting lice infestations and flea allergy dermatitis on dogs and cats. |
| Company details: | Merial Ancare |
| Address: | Level 3, Merial Building Osterley Way Manukau City New Zealand |
| Telephone number: | Phone: +64 9 980 1600 Fax: +64 9 980 1601 |
| Emergency telephone number: | Merial Ancare Freephone: 0800 800 822 National Poisons Centre: 0800 764 766 (0800 POISON) Fire Service, Ambulance: Dial 111 |
| Date of preparation: | 10 September 2007 |

SECTION 2: COMPOSITION/INFORMATION ON INGREDIENTS

| | | | |
|-----------------------------------|-------------------|--------------------------|-------------------|
| Chemical characterization: | Insecticide | | |
| Product components: | | | |
| <u>Name</u> | <u>CAS</u> | <u>Proportion</u> | |
| | | <u>Cat</u> | <u>Dog</u> |
| Fipronil | 120068-37-3 | 100g/L | 100g/L |
| (s) methoprene | 65733-16-6 | 120g/L | 90g/L |
| Ethanol | 64-17-5 | 79g/L | 79g/L |
| Diethylene Glycol Monoethyl Ether | 111-90-0 | q.s. 1000mL | q.s.1000mL |
| Polyvidone | 9003-39-8 | 50g/L | 50g/L |
| Polysorbate 80 | 9005-65-6 | 50g/L | 50g/L |

SECTION 3: HAZARDS IDENTIFICATION

| | |
|--|---|
| Hazard classifications: | 3.1C, 6.1D, 6.3B, 6.4A, 6.9B, 9.1A, 9.3B, 9.4A |
| Priority and secondary identifiers: | Warning – flammable liquid and vapour Harmful – keep out of reach of children Ecotoxic |
| Risk and safety phrases: | Flammable liquid and vapour Do not use or store near heat or open flame. Harmful – may be harmful if swallowed, inhaled or absorbed through the skin. Do not eat, drink or smoke while using. Wear protective clothing such as impervious gloves, waterproof hat, coat and trousers when using. Remove protective clothing and wash hands and face thoroughly before meals and after work. Warning – may cause mild skin irritation. Avoid skin contact. Harmful – may cause eye irritation. Avoid contact with eyes. Harmful – May cause organ damage from repeated oral exposure at high doses Ecotoxic – Very toxic to aquatic organisms. Avoid contamination of any water supply with product or empty container. |

Toxic to terrestrial vertebrates.

Very toxic to terrestrial invertebrates. Apply only as directed

SECTION 4: FIRST AID MEASURES

Necessary first aid measures:

Contact the National Poisons Information Centre for further information: phone 0800 POISON (764 766)

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, for at least 15 minutes

Skin Contact: If skin or hair contact occurs, remove contaminated clothing and flush skin and hair with running water.

Inhalation: If vapour or mist inhaled, remove from contaminated area. If adverse effects occur, contact a Doctor and show this SDS.

Ingestion: If swallowed, urgent hospital treatment is likely to be needed. Follow instructions of the Poisons Information Centre.

Workplace facilities:

N/A

Required instructions:

N/A

Notes for medical personnel:

The active ingredient, fipronil, is a phenylpyrazole that disrupts normal nerve function by blocking GABA-gated chloride channels. The action is selectively toxic to insects. Methoprene is of low toxicity with an NOEL rat is 250mg/kg/day.

SECTION 5: FIRE FIGHTING MEASURES

Type of hazard:

Flammable

Fire hazard properties:

Risk of explosion of containers exposed to fire.

Danger of toxic gases in smoke – Oxides of carbon and nitrogen, various organic substances.

Flash Point: 37.0°C

Regulatory requirements:

N/A

Extinguishing media and methods:

Recommended fire fighting media – water spray/fog, dry chemical, CO2 or alcohol resistant foam.

Unsuitable – water jets.

Contain spread of the fire fighting media.

Spray water on containers to cool. Contain contaminated fire-fighting water.

Hazchem code:

2Y[E]

Recommended protective clothing:

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.

SECTION 6: ACCIDENTAL RELEASE MEASURES

Emergency procedures:

Emergency personnel involved in spill cleanup should wear gloves, waterproof clothing, face shield, goggles, mask with cartridge. Eliminate sources of ignition. Do not breath vapour. Ventilate area of spillage well to evaporate residual vapours.

If spill or leak is of significant quantity, move non-essential persons away. Remove any sources of ignition from area. Seal leak if safe to do so. Remove leaving 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 labeled

| | |
|----------------------------|--|
| | container for disposal. Wet down contaminated area with water, cover with absorbent and sweep up and place in labeled container. Negotiate disposal with Waste Authority for jurisdiction. |
| Environmental Data: | No ecotoxicological data available for the formulated product. |

SECTION 7: HANDLING AND STORAGE

| | |
|---------------------------------------|---|
| Precautions for safe handling: | Ventilation. Avoid any direct contact with the product. When using, do not eat, drink or smoke. |
| Regulatory requirements: | N/A |
| Handling practices: | N/A |
| Approved handlers: | Not required |
| Conditions for safe storage: | Keep out of reach of children. Keep container tightly closed and in a well ventilated place. Keep away from source of ignition. No smoking. |
| Store site requirements: | N/A |
| Packaging: | Recommended material for packaging is high density polyethylene. Packing group II |

SECTION 8: EXPOSURE CONTROL/PERSONAL PROTECTION

| | |
|--|---|
| Workplace exposure standards: | N/A |
| Application in the workplace: | N/A |
| Exposure standards outside the workplace: | N/A |
| Engineering controls: | N/A |
| Personal protection: | Extract vapours at their point of emission. When using do not eat, drink or smoke. Wear gloves, waterproof clothing, face shield, goggles, mask with cartridge. |
| References: | N/A |

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

| | |
|---------------------------------|--|
| Specify product data: | <u>Appearance:</u> Clear, colourless liquid. <u>Flash Point:</u> 37.0°C <u>Flammability:</u> Flammable |
| Required specifications: | N/A |
| Further specifications: | N/A |
| Specific advice: | N/A |

SECTION 10: STABILITY AND REACTIVITY

| | |
|--|--|
| Stability of the substance: | Stable under normal conditions of use. No dangerous reaction known under normal conditions of use. |
| Conditions to avoid: | N/A |
| Material to avoid: | N/A |
| Hazardous decomposition products: | Danger of toxic gases in smoke – Oxides of carbon and nitrogen, various organic substances. |
| Hazardous polymerization: | N/A |

Specific data: N/A

SECTION 11: TOXICOLOGICAL INFORMATION

Data and interpretation:

Summaries data:

Effects of Acute Exposure:

Eye Contact: The formulation was non-irritating to the eyes of rabbits.

Skin Contact: The formulation was non-irritating on dermal application to rabbits.

LD50 dermal route >5000 mg/kg (rat)

No sensitising effect on guinea pig.

Inhalation: LC50 inhale (4hr) >6.32mg/L (rat)

Ingestion: LD50 oral route >2995mg/kg (rat)

Known antidote: No specific antidote known. Symptomatic treatment.

This product is a veterinary medicine and should be regarded as harmful if swallowed or absorbed. Does not contain heavy metals or halogenated compounds. Health effects from the likely routes of exposure:

LD50 acute oral rat: 750mg/kg

LD50 acute dermal rat: 5000mg/kg

Skin irritation (rabbit): Mild skin irritant

Eye irritation (rabbit): Eye irritant

Sensitisation (guinea pig) : Not a sensitising agent

Genotoxicity: Not available

Local effects of Product: Irritant to eyes and skin

Target organs: Eyes, skin, CNS

Hazardous ingredients: Fipronil R-PHRASW 20/21-36

HARMFUL BY INHALATION AND IN CONTACT WITH SKIN

Mutagenicity Data: not available

Sub-acute to chronic toxicity: There are no data on the reproductive effects of this mixture. One component of this product produced slight adverse reproductive effects at 2.5% in drinking water. For fipronil, the No Effect Level (NOEL) for adverse reproductive effects in rats was approximately 2.5mg/kg/day, with higher doses causing adverse effects. Ethanol is a known reproductive toxin, with overexposure to bulk volumes during pregnancy associated with numerous adverse effects on the foetus. 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 is a veterinary medicine and should be regarded as harmful if swallowed or absorbed.

Effects of Chronic Exposure: No further information available

SECTION 12: ENVIRONMENTAL INFORMATION

| | |
|---|--|
| Potential environmental interactions: | No ecotoxicological data available for the formulated product. |
| Data organisation : | N/A |
| Environmental risk and safety phrases: | Marine pollutant. |

SECTION 13: DISPOSAL CONSIDERATIONS

| | |
|-------------------------------|---|
| Disposal information : | Smaller quantities can be disposed of with household waste. To dispose of material, incineration in a licensed installation or place in an authorized landfill in accordance with Local Body regulations (product and contaminated packaging). |
|-------------------------------|---|

SECTION 14: TRANSPORT INFORMATION

| | |
|------------------------------|--|
| Relevant information: | Maximum Transport Quantity: 250 L DG Class 3 for road transport UN 1170 Tracking not required |
| Other requirements: | N/A |

SECTION 15: REGULATORY INFORMATION

| | |
|--------------------------------|--|
| Regulatory status: | Registered pursuant to the ACVM Act 1997, No.A9008 and A9009. See www.foodsafety.govt.nz for registration conditions. Approved pursuant to the HSNO Act 1996, Approval Code HSR001859. See www.epa.govt.nz for approval conditions. |
| HSNO and ACVM controls: | Refer to Section 3 |
| List exposure limits: | N/A |

SECTION 16: OTHER INFORMATION

| | |
|--------------------------------|--|
| Additional information: | For product information visit the Merial website www.merial.co.nz While the information set forth is believed to be accurate as of the date hereof, MERIAL NZ LTD. makes no warranty with respect hereto and disclaims all liability from reliance thereon. |
|--------------------------------|--|