

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006



Frontline® pump spray

Version	Revision Date:	SDS Number:	Date of last issue: 28.10.2019
2.0	06.12.2019	000000049035	Date of first issue: 28.10.2019

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1 Product identifier

Trade name : Frontline® pump spray

Synonyms : Frontline® Spray; Frontline® Spray against fleas and ticks with API: Fipronil

1.2 Relevant identified uses of the substance or mixture and uses advised against

Use of the Sub-stance/Mixture : Pharmaceutical

Recommended restrictions on use : Safety Data Sheet only for the professional user.

1.3 Details of the supplier of the safety data sheet

Company : Boehringer Ing. Pharma GmbH & Co.KG
Binger Straße 173
55216 Ingelheim

Telephone : +498007790900

E-mail address of person responsible for the SDS : EHS-Services@Boehringer-Ingelheim.com

1.4 Emergency telephone number

Int. Emergency Telephone number: +1 703-527-3887 Chemtrec 24-hours

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification (REGULATION (EC) No 1272/2008)

Flammable liquids , Category 2	H225: Highly flammable liquid and vapour.
Eye irritation , Category 2	H319: Causes serious eye irritation.
Specific target organ toxicity - single exposure , Category 3 , Central nervous system	H336: May cause drowsiness or dizziness.
Short-term (acute) aquatic hazard , Category 1	H400: Very toxic to aquatic life.
Long-term (chronic) aquatic hazard , Category 1	H410: Very toxic to aquatic life with long lasting effects.

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006



Frontline® pump spray

Version 2.0 Revision Date: 06.12.2019 SDS Number: 000000049035 Date of last issue: 28.10.2019
Date of first issue: 28.10.2019

2.2 Label elements

Labelling (REGULATION (EC) No 1272/2008)

Hazard pictograms	:	
Signal word	:	Danger
Hazard statements	:	H225 Highly flammable liquid and vapour. H319 Causes serious eye irritation. H336 May cause drowsiness or dizziness. H410 Very toxic to aquatic life with long lasting effects.
Precautionary statements	:	Prevention: P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. P233 Keep container tightly closed. P261 Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray. P273 Avoid release to the environment. Response: P370 + P378 In case of fire: Use dry sand, dry chemical or alcohol-resistant foam to extinguish. P391 Collect spillage.

Hazardous components which must be listed on the label:

propan-2-ol

2.3 Other hazards

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

This drug is not subject to the labelling requirements under the Globally Harmonized System (GHS)

The pharmacological effect of the medicament has to be considered (see package leaflet).

SECTION 3: Composition/information on ingredients

3.2 Mixtures

Chemical nature : organic

Hazardous components

Chemical name	CAS-No. EC-No. Index-No. Registration number	Classification	Concentration (% w/w)
propan-2-ol	67-63-0 200-661-7 603-117-00-0	Flam. Liq. 2; H225 Eye Irrit. 2; H319 STOT SE 3; H336	>= 70 - < 90

Frontline® pump spray

Version 2.0 Revision Date: 06.12.2019 SDS Number: 000000049035 Date of last issue: 28.10.2019
Date of first issue: 28.10.2019

Fipronil	120068-37-3 424-610-5 608-055-00-8	Acute Tox. 3; H301 Acute Tox. 3; H331 Acute Tox. 3; H311 STOT RE 1; H372 Aquatic Acute 1; H400 Aquatic Chronic 1; H410	>= 0,25 - < 1
----------	--	---	---------------

For explanation of abbreviations see section 16.

SECTION 4: First aid measures

4.1 Description of first aid measures

- General advice : In the case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).
First Aid responders should pay attention to self-protection and use the recommended protective clothing
Remove from exposure, lie down.
Take off immediately all contaminated clothing.
Victim to lie down in the recovery position, cover and keep him warm.
- If inhaled : Move to fresh air.
- In case of skin contact : Wash off immediately with plenty of water.
- In case of eye contact : Rinse immediately with plenty of water for at least 15 minutes.
Keep eye wide open while rinsing.
- If swallowed : Rinse mouth.
Drink plenty of water.

4.2 Most important symptoms and effects, both acute and delayed

- Symptoms : Drowsiness
Tremors
Gastrointestinal discomfort
- Risks : Vapours can have a narcotic effect.

Causes serious eye irritation.
May cause drowsiness or dizziness.

4.3 Indication of any immediate medical attention and special treatment needed

- Treatment : Observe the summary of product characteristics of proprietary medicinal products
Symptomatic treatment (decontamination, vital functions).

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006



Frontline® pump spray

Version	Revision Date:	SDS Number:	Date of last issue: 28.10.2019
2.0	06.12.2019	000000049035	Date of first issue: 28.10.2019

SECTION 5: Firefighting measures

5.1 Extinguishing media

- | | | |
|--------------------------------|---|---|
| Suitable extinguishing media | : | Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
Dry chemical
Foam
Carbon dioxide (CO ₂)
Water spray |
| Unsuitable extinguishing media | : | Water spray jet |

5.2 Special hazards arising from the substance or mixture

- | | | |
|---------------------------------------|---|--|
| Specific hazards during fire-fighting | : | In case of fire and/or explosion do not breathe fumes.
Vapours are heavier than air and may spread along floors.
Can be released in case of fire:
Carbon oxides |
|---------------------------------------|---|--|

5.3 Advice for firefighters

- | | | |
|---|---|---|
| Special protective equipment for firefighters | : | In the event of fire, wear self-contained breathing apparatus.
Complete suit protecting against chemicals |
| Further information | : | Collect contaminated fire extinguishing water separately. This must not be discharged into drains.
Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations. |

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

- | | | |
|----------------------|---|---|
| Personal precautions | : | Wear personal protective equipment.
Ensure adequate ventilation.
High risk of slipping due to leakage/spillage of product.
Suppress vapours with waterspray. |
|----------------------|---|---|

6.2 Environmental precautions

- | | | |
|---------------------------|---|---|
| Environmental precautions | : | Do not flush into surface water or sanitary sewer system. |
|---------------------------|---|---|

6.3 Methods and material for containment and cleaning up

- | | | |
|-------------------------|---|---|
| Methods for cleaning up | : | Pick up and transfer to properly labelled containers. |
|-------------------------|---|---|

6.4 Reference to other sections

For personal protection see section 8., For disposal considerations see section 13.

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006



Frontline® pump spray

Version 2.0 Revision Date: 06.12.2019 SDS Number: 000000049035 Date of last issue: 28.10.2019
Date of first issue: 28.10.2019

SECTION 7: Handling and storage

7.1 Precautions for safe handling

- Advice on safe handling : Provide sufficient air exchange and/or exhaust in work rooms.
- Advice on protection against fire and explosion : Keep away from heat and sources of ignition. Vapours may form explosive mixture with air.
- Hygiene measures : General industrial hygiene practice. Wash hands and face before breaks and immediately after handling the product. Keep working clothes separately.

7.2 Conditions for safe storage, including any incompatibilities

- Requirements for storage areas and containers : Protect from heat and direct sunlight.
- Advice on common storage : Keep away from food, drink and animal feedingstuffs. Observe joint storage prohibition.
- Storage class (TRGS 510) : 3, Flammable Liquids

7.3 Specific end use(s)

- Specific use(s) : Consult the technical guidelines for the use of this substance/mixture.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Occupational Exposure Limits

Components	CAS-No.	Value type (Form of exposure)	Control parameters	Basis
propan-2-ol	67-63-0	AGW	200 ppm 500 mg/m ³	DE TRGS 900
Peak-limit: excursion factor (category)	2;(II)			
Further information	Senate commission for the review of compounds at the work place dangerous for the health (MAK-commission)., When there is compliance with the OEL and biological tolerance values, there is no risk of harming the unborn child			

Biological occupational exposure limits

Substance name	CAS-No.	Control parameters	Sampling time	Basis
propan-2-ol	67-63-0	Acetone: 25 mg/l	Immediately after	TRGS 903

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006



Frontline® pump spray

Version 2.0 Revision Date: 06.12.2019 SDS Number: 000000049035 Date of last issue: 28.10.2019
Date of first issue: 28.10.2019

		(Blood)	exposure or after working hours	
		Acetone: 25 mg/l (Urine)	Immediately after exposure or after working hours	TRGS 903

Derived No Effect Level (DNEL) according to Regulation (EC) No. 1907/2006:

Substance name	End Use	Exposure routes	Potential health effects	Value
propan-2-ol	Workers	Dermal	Long-term systemic effects	888 mg/kg
	Workers	Inhalation	Long-term systemic effects	500 mg/m ³

Predicted No Effect Concentration (PNEC) according to Regulation (EC) No. 1907/2006:

Substance name	Environmental Compartment	Value
propan-2-ol	Fresh water	140,9 mg/l
	Marine water	140,9 mg/l
	Sewage treatment plant	2251 mg/l
	Fresh water sediment	552 mg/l
	Marine sediment	552 mg/l
	Water	160 mg/l
	Soil	28 mg/l
	Water	140,9 mg/l

8.2 Exposure controls

Engineering measures

Not applicable

Personal protective equipment

Eye protection : Always wear eye protection when the potential for inadvertent eye contact with the product cannot be excluded.

Safety glasses with side-shields

Hand protection

Material : Nitrile rubber
Glove thickness : 0,43 mm
Directive : Protective gloves against chemicals and micro-organisms
Protective index : Class 6

Remarks : The break through time depends amongst other things on the material, the thickness and the type of glove and therefore has to be measured for each case.

Skin and body protection : Protective work clothing

Respiratory protection : No personal respiratory protective equipment normally required.
Breathing apparatus needed only when aerosol or mist is formed.
Respiratory protection
ABEK2

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006



Frontline® pump spray

Version	Revision Date:	SDS Number:	Date of last issue: 28.10.2019
2.0	06.12.2019	000000049035	Date of first issue: 28.10.2019

Protective measures : Handle in accordance with good industrial hygiene and safety practice.
Avoid contact with skin, eyes and clothing.
Only use protective equipment in accordance with national/international regulations. Follow the national regulations about wearing personal protective equipment and the warranty given by the manufacturer for the safe function.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Appearance	: liquid
Colour	: amber
Odour	: alcohol-like
Odour Threshold	: No data available
pH	: No data available
Melting point/range	: No data available
Boiling point/boiling range	: 82 °C (related to the solvent(s))
Flash point	: 12 °C (related to the solvent(s))
Evaporation rate	: No data available
Upper explosion limit / Upper flammability limit	: 12,7 %(V) (related to the solvent(s))
Lower explosion limit / Lower flammability limit	: 2 %(V) (related to the solvent(s))
Vapour pressure	: 43 hPa (20 °C) (related to the solvent(s))
Relative vapour density	: No data available
Relative density	: No data available
Bulk density	: Not applicable
Solubility(ies)	
Water solubility	: soluble
Partition coefficient: n-octanol/water	: No data available

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006



Frontline® pump spray

Version	Revision Date:	SDS Number:	Date of last issue: 28.10.2019
2.0	06.12.2019	000000049035	Date of first issue: 28.10.2019

Auto-ignition temperature : No data available

Decomposition temperature : No decomposition if used as directed.

Viscosity
Viscosity, dynamic : No data available

Explosive properties : Not tested

Oxidizing properties : No data available

9.2 Other information

Self-ignition : 425 °C
Method: ASTM E 659 - Standard Test Method for Autoignition Temperature of Liquid Chemicals (related to the solvent(s))

SECTION 10: Stability and reactivity

10.1 Reactivity

No dangerous reaction known under conditions of normal use.

10.2 Chemical stability

No decomposition if stored and applied as directed.

10.3 Possibility of hazardous reactions

Hazardous reactions : Heating can release vapours which can be ignited.
Vapours may form explosive mixture with air.

10.4 Conditions to avoid

Conditions to avoid : Extremes of temperature and direct sunlight.
Electrostatic discharge

10.5 Incompatible materials

Materials to avoid : Oxidizing agents

10.6 Hazardous decomposition products

No data available

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity

Product:

Acute oral toxicity : Acute toxicity estimate: > 2.000 mg/kg
Method: Calculation method

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006



Frontline® pump spray

Version 2.0 Revision Date: 06.12.2019 SDS Number: 000000049035 Date of last issue: 28.10.2019
Date of first issue: 28.10.2019

Acute inhalation toxicity : Acute toxicity estimate: > 5 mg/l
Exposure time: 4 h
Test atmosphere: dust/mist
Method: Calculation method

Acute dermal toxicity : Acute toxicity estimate: > 2.000 mg/kg
Method: Calculation method

Components:

propan-2-ol:

Acute oral toxicity : LD50 (Rat): 4.750 mg/kg

Acute inhalation toxicity : LC50 (Rat): 30 mg/l
Exposure time: 4 h
Test atmosphere: vapour

Acute dermal toxicity : LD50 (Rabbit): 12.800 mg/kg

Fipronil:

Acute oral toxicity : LD50 (Rat): 97 mg/kg
Assessment: The component/mixture is toxic after single ingestion.

Acute inhalation toxicity : LC50 (Rabbit): 0,68 mg/l
Exposure time: 4 h
Test atmosphere: dust/mist
Assessment: The component/mixture is toxic after short term inhalation.

Acute dermal toxicity : LD50 (Rat): 354 mg/kg
Assessment: The component/mixture is toxic after single contact with skin.

Skin corrosion/irritation

Components:

propan-2-ol:

Remarks : No data available.

Fipronil:

Species : Rabbit
Exposure time : 4 h
Method : OECD Test Guideline 404
Result : No skin irritation

Serious eye damage/eye irritation

Causes serious eye irritation.

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006



Frontline® pump spray

Version 2.0 Revision Date: 06.12.2019 SDS Number: 000000049035 Date of last issue: 28.10.2019
Date of first issue: 28.10.2019

Components:

propan-2-ol:

Result : irritating

Fipronil:

Species : Rabbit
Method : OECD Test Guideline 405
Result : No eye irritation

Respiratory or skin sensitisation

Components:

propan-2-ol:

Remarks : No data available

Fipronil:

Test Type : Maximisation Test
Species : Guinea pig
Method : OECD Test Guideline 406
Result : Does not cause skin sensitisation.

Germ cell mutagenicity

Components:

propan-2-ol:

Genotoxicity in vitro : Remarks: No data available

Genotoxicity in vivo : Remarks: No data available

Fipronil:

Genotoxicity in vitro : Test system: Salmonella typhimurium
Metabolic activation: with and without metabolic activation
Method: OECD Test Guideline 471
Result: negative

Test system: Escherichia coli
Metabolic activation: with and without metabolic activation
Method: OECD Test Guideline 471
Result: negative

Test Type: Cytogenetic assay
Test system: Human lymphocytes
Metabolic activation: with and without metabolic activation
Method: OECD Test Guideline 473
Result: negative

Test Type: Chromosomal aberration test
Test system: V79 cells (Chinese hamster)

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006



Frontline® pump spray

Version	Revision Date:	SDS Number:	Date of last issue: 28.10.2019
2.0	06.12.2019	000000049035	Date of first issue: 28.10.2019

Metabolic activation: with and without metabolic activation
Method: OECD Test Guideline 473
Result: negative

Test Type: Mammalian cell gene mutation assay
Test system: V79 cells (Chinese hamster)
Metabolic activation: with and without metabolic activation
Method: OECD Test Guideline 476
Result: negative

Genotoxicity in vivo : Test Type: Micronucleus test
Species: Mouse (male and female)
Application Route: Oral
Result: negative

Test Type: Unscheduled DNA synthesis
Species: Rat (male)
Application Route: Oral
Result: negative

Carcinogenicity

Components:

propan-2-ol:

Remarks : No data available

Fipronil:

Application Route : Oral
: 0,06 mg/kg bw/day

Reproductive toxicity

Components:

propan-2-ol:

Effects on fertility : Remarks: No data available

Effects on foetal development : Remarks: No data available

Fipronil:

Effects on fertility : Remarks: No data available

Effects on foetal development : Species: Rat
General Toxicity Maternal: NOAEL: 4 mg/kg body weight
Developmental Toxicity: NOAEL: 20 mg/kg body weight

STOT - single exposure

May cause drowsiness or dizziness.

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006



Frontline® pump spray

Version	Revision Date:	SDS Number:	Date of last issue: 28.10.2019
2.0	06.12.2019	000000049035	Date of first issue: 28.10.2019

SECTION 12: Ecological information

12.1 Toxicity

Components:

propan-2-ol:

Toxicity to fish : LC50 (Pimephales promelas (fathead minnow)): 9.640 mg/l
Exposure time: 96 h

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 13.299 mg/l
Exposure time: 78 h

Toxicity to algae : Remarks: No data available.

EC50 (Algae): > 100 mg/l
Exposure time: 72 h

Toxicity to microorganisms :
Remarks: No data available.

Toxicity to fish (Chronic toxicity) : Remarks: No data available

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : Remarks: No data available

Fipronil:

Toxicity to fish : LC50 (Oncorhynchus mykiss (rainbow trout)): 0,248 mg/l
Exposure time: 96 h

LC50 (Lepomis macrochirus (Bluegill sunfish)): 0,0852 mg/l
Exposure time: 96 h

NOEC (Lepomis macrochirus (Bluegill sunfish)): 0,0432 mg/l
Exposure time: 96 h

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 0,190 mg/l
Exposure time: 48 h

Toxicity to algae : EC50 (Desmodesmus subspicatus (green algae)): 0,068 mg/l
End point: Growth rate
Exposure time: 96 h
Method: OECD Test Guideline 201

NOEC (Desmodesmus subspicatus (green algae)): 0,04 mg/l
End point: Growth rate
Exposure time: 96 h
Method: OECD Test Guideline 201

EC50 (Anabaena flos-aquae (cyanobacterium)): > 0,17 mg/l
End point: Growth rate

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006



Frontline® pump spray

Version	Revision Date:	SDS Number:	Date of last issue: 28.10.2019
2.0	06.12.2019	000000049035	Date of first issue: 28.10.2019

Exposure time: 120 h

NOEC (Anabaena flos-aquae (cyanobacterium)): 0,17 mg/l
End point: Growth rate
Exposure time: 120 h

EC50 (Selenastrum capricornutum (green algae)): > 0,14 mg/l
End point: Growth rate
Exposure time: 120 h

NOEC (Selenastrum capricornutum (green algae)): 0,14 mg/l
End point: Growth rate
Exposure time: 120 h

M-Factor (Short-term (acute) aquatic hazard) : 1.000

Toxicity to microorganisms : EC50 (activated sludge): > 1.000 mg/l
Exposure time: 3 h
Method: OECD Test Guideline 209

Toxicity to fish (Chronic toxicity) : NOEC: 0,015 mg/l
Exposure time: 90 d
Species: Oncorhynchus mykiss (rainbow trout)
Method: OECD Test Guideline 210

Lowest observed effect concentration: 0,026 mg/l
Exposure time: 90 d
Species: Oncorhynchus mykiss (rainbow trout)
Method: OECD Test Guideline 210

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEC: 5 - 20 µg/l
End point: Immobilization
Exposure time: 21 d
Species: Daphnia (water flea)
Test Type: flow-through test
Method: Daphnia sp., Reproduction Test.

M-Factor (Long-term (chronic) aquatic hazard) : 10.000

Toxicity to soil dwelling organisms : Test Type: artificial soil
LC50: > 1.000 mg/kg
Exposure time: 14 d
Species: 'Eisenia foetida'
Method: Earthworm, Acute Toxicity Test.

Toxicity to terrestrial organisms : LD50: 0,00000417
Exposure time: 48 d
End point: Acute oral toxicity
Species: Apis mellifera (bees)

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006



Frontline® pump spray

Version	Revision Date:	SDS Number:	Date of last issue: 28.10.2019
2.0	06.12.2019	000000049035	Date of first issue: 28.10.2019

very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher..

12.6 Other adverse effects

Components:

propan-2-ol:

Additional ecological information : No data available

Fipronil:

Additional ecological information : No data available

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Product : Dispose of in accordance with local regulations. Must not be disposed off together with household garbage. Do not allow product to reach sewage system.

Contaminated packaging : Packs that cannot be cleaned should be disposed of in the same manner as the contents. Uncontaminated packaging can be recycled.

SECTION 14: Transport information

14.1 UN number

ADR : UN 1219
RID : UN 1219
IMDG : UN 1219
IATA : UN 1219

14.2 UN proper shipping name

ADR : ISOPROPANOL SOLUTION
RID : ISOPROPANOL SOLUTION
IMDG : ISOPROPANOL SOLUTION
IATA : Isopropanol Solution

14.3 Transport hazard class(es)

ADR : 3
RID : 3
IMDG : 3

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006



Frontline® pump spray

Version 2.0 Revision Date: 06.12.2019 SDS Number: 000000049035 Date of last issue: 28.10.2019
Date of first issue: 28.10.2019

IATA : 3

14.4 Packing group

ADR

Packing group : II
Classification Code : F1
Hazard Identification Number : 33
Labels : 3
Tunnel restriction code : (D/E)

RID

Packing group : II
Classification Code : F1
Hazard Identification Number : 33
Labels : 3

IMDG

Packing group : II
Labels : 3
EmS Code : F-E, S-D

IATA (Cargo)

Packing instruction (cargo aircraft) : 364
Packing instruction (LQ) : Y341
Packing group : II
Labels : Class 3 - Flammable liquids

IATA (Passenger)

Packing instruction (passenger aircraft) : 353
Packing instruction (LQ) : Y341
Packing group : II
Labels : Class 3 - Flammable liquids

14.5 Environmental hazards

ADR

Environmentally hazardous : yes

RID

Environmentally hazardous : yes

IMDG

Marine pollutant : yes

IATA (Passenger)

Environmentally hazardous : yes

IATA (Cargo)

Environmentally hazardous : yes

14.6 Special precautions for user

The transport classification(s) provided herein are for informational purposes only, and solely based upon the properties of the unpackaged material as it is described within this Safety Data Sheet. Transportation classifications may vary by mode of transportation, package sizes, and variations in regional or country regulations.

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006



Frontline® pump spray

Version 2.0 Revision Date: 06.12.2019 SDS Number: 000000049035 Date of last issue: 28.10.2019
Date of first issue: 28.10.2019

14.7 Transport in bulk according to Annex II of Marpol and the IBC Code

Not applicable for product as supplied.

SECTION 15: Regulatory information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

- Regulation (EC) No 649/2012 of the European Parliament and the Council concerning the export and import of dangerous chemicals : Fipronil
- REACH - Candidate List of Substances of Very High Concern for Authorisation (Article 59). : Not applicable
- REACH - List of substances subject to authorisation (Annex XIV) : Not applicable
- Regulation (EC) No 1005/2009 on substances that deplete the ozone layer : Not applicable
- Regulation (EC) No 850/2004 on persistent organic pollutants : Not applicable
- REACH - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, preparations and articles (Annex XVII) : Conditions of restriction for the following entries should be considered: (3)
- Seveso III: Directive 2012/18/EU of the European Parliament and of the Council on the control of major-accident hazards involving dangerous substances.
- | | | Quantity 1 | Quantity 2 |
|-----|-----------------------|------------|------------|
| P5c | FLAMMABLE LIQUIDS | 5.000 t | 50.000 t |
| E1 | ENVIRONMENTAL HAZARDS | 100 t | 200 t |
- Water contaminating class (Germany) : WGK 3 highly hazardous to water
- Volatile organic compounds : Directive 2010/75/EU of 24 November 2010 on industrial emissions (integrated pollution prevention and control)
Volatile organic compounds (VOC) content: 80 %

Other regulations:

Take note of Directive 94/33/EC on the protection of young people at work or stricter national regulations, where applicable.

The components of this product are reported in the following inventories:

- REACH : Not in compliance with the inventory
- DSL : This product contains the following components that are not on the Canadian DSL nor NDSL.

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006



Frontline® pump spray

Version 2.0 Revision Date: 06.12.2019 SDS Number: 000000049035 Date of last issue: 28.10.2019
Date of first issue: 28.10.2019

Fipronil

- AICS : Not in compliance with the inventory
- NZIoC : Not in compliance with the inventory
- ENCS : Not in compliance with the inventory
- ISHL : Not in compliance with the inventory
- KECI : On the inventory, or in compliance with the inventory
- PICCS : Not in compliance with the inventory
- IECSC : Not in compliance with the inventory
- TCSI : On the inventory, or in compliance with the inventory
- TSCA : Substance(s) not listed on TSCA inventory

15.2 Chemical safety assessment

A Chemical Safety Assessment is not required for this substance when it is used in the specified applications.

SECTION 16: Other information

Full text of H-Statements

- H225 : Highly flammable liquid and vapour.
- H301 : Toxic if swallowed.
- H311 : Toxic in contact with skin.
- H319 : Causes serious eye irritation.
- H331 : Toxic if inhaled.
- H336 : May cause drowsiness or dizziness.
- H372 : Causes damage to organs through prolonged or repeated exposure.
- H400 : Very toxic to aquatic life.
- H410 : Very toxic to aquatic life with long lasting effects.

Full text of other abbreviations

- Acute Tox. : Acute toxicity
- Aquatic Acute : Short-term (acute) aquatic hazard
- Aquatic Chronic : Long-term (chronic) aquatic hazard
- Eye Irrit. : Eye irritation
- Flam. Liq. : Flammable liquids
- STOT RE : Specific target organ toxicity - repeated exposure
- STOT SE : Specific target organ toxicity - single exposure
- DE TRGS 900 : Germany. TRGS 900 - Occupational exposure limit values.
- TRGS 903 : TRGS 903 - Biological limit values
- DE TRGS 900 / AGW : Time Weighted Average

ADN - European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways; ADR - European Agreement concerning the International Carriage of Dangerous

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006



Frontline® pump spray

Version 2.0 Revision Date: 06.12.2019 SDS Number: 000000049035 Date of last issue: 28.10.2019
Date of first issue: 28.10.2019

Goods by Road; AICS - Australian Inventory of Chemical Substances; ASTM - American Society for the Testing of Materials; bw - Body weight; CLP - Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DSL - Domestic Substances List (Canada); ECHA - European Chemicals Agency; EC-Number - European Community number; ECx - Concentration associated with x% response; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; n.o.s. - Not Otherwise Specified; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; RID - Regulations concerning the International Carriage of Dangerous Goods by Rail; SADT - Self-Accelerating Decomposition Temperature; SDS - Safety Data Sheet; SVHC - Substance of Very High Concern; TCSI - Taiwan Chemical Substance Inventory; TRGS - Technical Rule for Hazardous Substances; TSCA - Toxic Substances Control Act (United States); UN - United Nations; vPvB - Very Persistent and Very Bioaccumulative

Further information

- Training advice : Provide adequate information, instruction and training for operators.
- Other information : Vertical lines in the left hand margin indicate an amendment from the previous version.
- Sources of key data used to compile the Safety Data Sheet : The specifications are based on own tests and/or literature data.

Classification of the mixture:

Flam. Liq. 2	H225
Eye Irrit. 2	H319
STOT SE 3	H336
Aquatic Acute 1	H400
Aquatic Chronic 1	H410

Classification procedure:

Based on product data or assessment
Calculation method
Calculation method
Calculation method
Calculation method

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006



Frontline® pump spray

Version	Revision Date:	SDS Number:	Date of last issue: 28.10.2019
2.0	06.12.2019	000000049035	Date of first issue: 28.10.2019

to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

DE / EN