

# 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 Substance/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

# SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006



Boehringer  
Ingelheim

## 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	$\geq 0,25 - < 1$
----------	------------------------------------------	---------------------------------------------------------------------------------------------------------------------------------------------	-------------------

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.<br>Dry chemical<br>Foam<br>Carbon dioxide (CO <sub>2</sub> )<br>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.<br>Vapours are heavier than air and may spread along floors.<br>Can be released in case of fire:<br>Carbon oxides |
|---------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

#### 5.3 Advice for firefighters

- |                                               |                                                                                                                                                                                                                           |
|-----------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Special protective equipment for firefighters | : In the event of fire, wear self-contained breathing apparatus.<br>Complete suit protecting against chemicals                                                                                                            |
| Further information                           | : Collect contaminated fire extinguishing water separately. This must not be discharged into drains.<br>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.<br>Ensure adequate ventilation.<br>High risk of slipping due to leakage/spillage of product.<br>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	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 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 <sup>3</sup>	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



Boehringer  
Ingelheim

## 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/m3

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

---

### Components:

#### **propan-2-ol:**

Assessment : May cause drowsiness or dizziness.

#### **Fipronil:**

Remarks : No data available

### **STOT - repeated exposure**

### Components:

#### **propan-2-ol:**

Remarks : No data available

#### **Fipronil:**

Assessment : The substance or mixture is classified as specific target organ toxicant, repeated exposure, category 1.

### **Repeated dose toxicity**

### Components:

#### **Fipronil:**

Species	: Rat
Application Route	: Oral
Exposure time	: 13 weeks
Dose	: 1,5,30,300 ppm

### **Aspiration toxicity**

### Components:

#### **propan-2-ol:**

No data available

#### **Fipronil:**

No data available

### **Further information**

### Components:

#### **Fipronil:**

Remarks : 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

### 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 : EC50 (Daphnia magna (Water flea)): 13.299 mg/l  
aquatic invertebrates 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 tox- : Remarks: No data available  
icity)

Toxicity to daphnia and other : Remarks: No data available  
aquatic invertebrates (Chron-  
ic toxicity)

##### **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 : EC50 (Daphnia magna (Water flea)): 0,190 mg/l  
aquatic invertebrates 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



Boehringer  
Ingelheim

## 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

---

### 12.2 Persistence and degradability

#### Components:

##### **propan-2-ol:**

Biodegradability : Result: Readily biodegradable.

##### **Fipronil:**

Biodegradability : Result: not rapidly degradable  
Biodegradation: 47 %  
Exposure time: 28 d  
Method: OECD Test Guideline 301B

### 12.3 Bioaccumulative potential

#### Components:

##### **propan-2-ol:**

Bioaccumulation : Remarks: No data available.

Partition coefficient: n-octanol/water : Remarks: No data available.

log Pow: <= 4

##### **Fipronil:**

Bioaccumulation : Exposure time: 14 d  
Bioconcentration factor (BCF): 321  
Remarks: No bioaccumulation is to be expected (log Pow <= 4).

Partition coefficient: n-octanol/water : log Pow: 3,5 - 4,0 (20 °C)

### 12.4 Mobility in soil

#### Components:

##### **propan-2-ol:**

Distribution among environmental compartments : Remarks: No data available

##### **Fipronil:**

Distribution among environmental compartments : Remarks: No data available

### 12.5 Results of PBT and vPvB assessment

#### Product:

Assessment : This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or

# 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	Revision Date:	SDS Number:	Date of last issue: 28.10.2019
2.0	06.12.2019	000000049035	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	Revision Date:	SDS Number:	Date of last issue: 28.10.2019
2.0	06.12.2019	000000049035	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.			
P5c	FLAMMABLE LIQUIDS	Quantity 1 5.000 t	Quantity 2 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	Revision Date:	SDS Number:	Date of last issue: 28.10.2019
2.0	06.12.2019	000000049035	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	Revision Date:	SDS Number:	Date of last issue: 28.10.2019
2.0	06.12.2019	000000049035	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