

# SAFETY DATA SHEET

## Bayvarol Strips



Version 1.0      Revision Date: 07.06.2019      SDS Number: 122000001007      Date of last issue: -  
Date of first issue: 07.06.2019

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### SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

#### 1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

##### 1.1 Product identifier

Bayvarol Strips

HSNO Approval Number : HSR000756

ACVM number : P005693

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

Use of the Sub- : Pesticide  
stance/Mixture

##### 1.3 Details of the supplier of the safety data sheet

###### Company

Bayer New Zealand Limited  
3 Argus Place  
0627 HILLCREST, AUCKLAND, NEW ZEALAND  
NEW ZEALAND  
Tel.: 0800 652 488  
Fax: 0800 229 838  
Mail: bhc-md-oeko@bayer.com

##### 1.4 Emergency telephone number

**In case of emergency:** 0800 734 607 IXOM SH&E Shared services (24hr)

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### SECTION 2. HAZARDS IDENTIFICATION

#### GHS Classification

9.1: Aquatic toxicity (Acute or : Category D  
Chronic)

#### GHS label elements

Hazard pictograms : None

Signal word : None

Hazard statements : H402 Harmful to aquatic life.

Precautionary statements : **Prevention:**  
P273 Avoid release to the environment.  
**Response:**  
P312 Call a POISON CENTER or doctor/ physician if you feel unwell.  
P391 Collect spillage.  
**Disposal:**

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P501 Dispose of contents/ container to an approved waste disposal plant.

### Other hazards which do not result in classification

None known.

## SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Mixture

### Hazardous components

| Chemical name | CAS-No.    | Concentration (% w/w)  |
|---------------|------------|------------------------|
| Polyethylene  | 9002-88-4  | $\geq 90$ - $\leq 100$ |
| Acetone       | 67-64-1    | $\geq 1$ - $< 10$      |
| Flumethrin    | 69770-45-2 | $\geq 0,025$ - $< 0,1$ |

## SECTION 4. FIRST AID MEASURES

- General advice : You should call the National Poisons Centre if you feel that you may have been harmed or irritated by this product. The number is 0800 764 766 (0800 POISON) (24hr emergency service).  
Take off all contaminated clothing immediately.
- If inhaled : Remove to fresh air.  
If symptoms persist, call a physician.
- In case of skin contact : After contact with skin, wash immediately with plenty of soap and water.  
If skin reactions occur, contact a physician.
- In case of eye contact : In the case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
- If swallowed : If swallowed, seek medical advice immediately and show this container or label.
- Most important symptoms and effects, both acute and delayed : No information available.
- Notes to physician : No information available.

## SECTION 5. FIREFIGHTING MEASURES

- Suitable extinguishing media : Any
- Specific hazards during fire-fighting : Fire may cause evolution of:  
Hydrogen cyanide (hydrocyanic acid)  
Hydrogen chloride gas  
Nitrogen oxides (NO<sub>x</sub>)  
Carbon oxides

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Specific extinguishing methods : Prevent fire extinguishing water from contaminating surface water or the ground water system.

Special protective equipment for firefighters : In the event of fire, wear self-contained breathing apparatus.

### SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures : Use personal protective equipment. Avoid dust formation.

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

Methods and materials for containment and cleaning up : Contain spillage, and then collect with an electrically protected vacuum cleaner or by wet-brushing and place in container for disposal according to local regulations (see section 13).

### SECTION 7. HANDLING AND STORAGE

Advice on protection against fire and explosion : No special protective measures against fire required.

Advice on safe handling : No special precautions required.

Hygiene measures : Cleanliness Guidelines (GMP) for manufacturing of drugs must be observed!

Conditions for safe storage : For storage suitable stores with adequate product-reception volume must be used. During handling local official regulations must be observed in order to avert impairment of water by the product.

### SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

#### Components with workplace control parameters

| Components | CAS-No.  | Value type (Form of exposure) | Control parameters / Permissible concentration | Basis  |
|------------|--|-------------------------------|--|--------|
| Acetone    | 67-64-1  | WES-TWA                       | 500 ppm<br>1.185 mg/m <sup>3</sup>             | NZ OEL |
|            | Further information: Exposure can also be estimated by biological monitoring |                               |  |        |
|            |  | WES-STEL                      | 1.000 ppm<br>2.375 mg/m <sup>3</sup>           | NZ OEL |
|            | Further information: Exposure can also be estimated by biological monitoring |                               |  |        |
|            |  | TWA                           | 250 ppm  | ACGIH  |
|            |  | STEL                          | 500 ppm  | ACGIH  |
| Flumethrin | 69770-45-2   | Bayer OES                     | 0,02 mg/m <sup>3</sup>                         |        |

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### Biological occupational exposure limits

| Components | CAS-No. | Control parameters | Biological specimen | Sam-pling time   | Permissible concentra-tion | Basis     |
|------------|---------|--------------------|---------------------|--|----------------------------|-----------|
| Acetone    | 67-64-1 | Acetone            | Urine               | End of shift   | 50 mg/l                    | NZ BEI    |
|            |         | Acetone            | Urine               | End of shift (As soon as possible after exposure ceases) | 25 mg/l                    | ACGIH BEI |

### Personal protective equipment

Respiratory protection : No personal respiratory protective equipment normally required.  
Breathing apparatus only if aerosol or dust is formed.  
Effective dust mask

Hand protection  
Material : Hand protection: protective gloves for chemicals made of Baypren, nitrile rubber or PVC wear

Remarks : Breakthrough time not tested; dispose of immediately after contamination. Advice: The gloves should not be reused.

Eye protection : Safety glasses

Protective measures : No special safety precautions are required during handling of pharmaceuticals in their intended finished form (tablets or liquid formulations) by chemists, the hospital's medical staff or patients.  
For the intake of ready for use pharmaceuticals or the external use on the skin please read the label and the package leaflet.  
Wear suitable protective equipment.  
The personal protective equipment is applicable for the handling of bulk material without packaging and for incidents if an exposure by the active ingredient or hazardous components can be expected.

## SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance : solid

Colour : white

Odour : weak

Melting point/range : ca. 120 °C

Vapour pressure : Not applicable

Solubility(ies)

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Water solubility : insoluble

Auto-ignition temperature : No data available

Decomposition temperature : No data available

Oxidizing properties : No data available

Minimum ignition energy : No data available

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### SECTION 10. STABILITY AND REACTIVITY

Reactivity : No data available

Chemical stability : No data available

Possibility of hazardous reactions : No data available

Conditions to avoid : Do not allow product to come in contact with:  
Heat  
Exposure to moisture

Incompatible materials : No data available

Hazardous decomposition products : Hydrogen cyanide (hydrocyanic acid)  
Hydrogen chloride gas  
Nitrogen oxides (NOx)  
Carbon oxides

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### SECTION 11. TOXICOLOGICAL INFORMATION

#### Acute toxicity

##### Product:

Acute oral toxicity : Acute toxicity estimate (ATE): 2.530 mg/kg  
Method: Calculation method

##### Components:

##### **Polyethylene:**

Acute oral toxicity : LD50 (Rat): > 3.000 mg/kg  
Assessment: The component/mixture is minimally toxic after single ingestion.

##### **Acetone:**

Acute oral toxicity : LD50 (Rat): 5.800 mg/kg

Acute inhalation toxicity : LC50 (Rat): 76,3 mg/l, 32000 ppm  
Exposure time: 4 h  
Test atmosphere: vapour

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Acute dermal toxicity : LD50 (Rabbit): > 15.700 mg/kg

### **Flumethrin:**

Acute oral toxicity : LD50 (Rat): 175 mg/kg  
Test substance: in corn oil

Acute inhalation toxicity : LC50 (Rat): 0,572 mg/l  
Exposure time: 4 h  
Test atmosphere: dust/mist/aerosol  
Method: OECD 403

Acute dermal toxicity : LD50 (Rat, female): 1.436 mg/kg

### **Skin corrosion/irritation**

#### **Components:**

##### **Polyethylene:**

Result: No skin irritation

##### **Acetone:**

Species: Rabbit

Result: No skin irritation

Remarks: Repeated or prolonged contact with the mixture may cause removal of natural fat from the skin resulting in desiccation of the skin.

##### **Flumethrin:**

Species: Rabbit

Result: No skin irritation

### **Serious eye damage/eye irritation**

#### **Components:**

##### **Polyethylene:**

Result: No eye irritation

##### **Acetone:**

Species: Rabbit

Result: Irritating to eyes.

##### **Flumethrin:**

Species: Rabbit

Result: No eye irritation

### **Respiratory or skin sensitisation**

#### **Components:**

##### **Acetone:**

Species: Guinea pig

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Result: Does not cause skin sensitisation.

### **Flumethrin:**

Test Type: Skin sensitisation

Species: Guinea pig

Method: Magnusson and Kligmann maximization test

Result: Did not cause sensitisation on laboratory animals.

### **Chronic toxicity**

#### **Germ cell mutagenicity**

##### **Components:**

##### **Acetone:**

Genotoxicity in vitro                   : Test Type: Ames test  
Result: negative

##### **Flumethrin:**

Genotoxicity in vitro                   : Result: No evidence of a genotoxic effect.

Genotoxicity in vivo                   : Result: No evidence of a genotoxic effect.

### **Carcinogenicity**

##### **Components:**

##### **Flumethrin:**

Species: Rat

Result: Animal testing did not show any carcinogenic effects.

### **Reproductive toxicity**

##### **Components:**

##### **Flumethrin:**

Effects on fertility                   : Species: Rat  
Result: Animal testing did not show any effects on fertility.

### **STOT - single exposure**

##### **Components:**

##### **Polyethylene:**

Assessment: The substance or mixture is not classified as specific target organ toxicant, single exposure.

##### **Acetone:**

Exposure routes: Inhalation

Assessment: May cause drowsiness or dizziness.

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### **Flumethrin:**

Assessment: The substance or mixture is not classified as specific target organ toxicant, single exposure.

### **STOT - repeated exposure**

#### **Components:**

#### **Polyethylene:**

Assessment: The substance or mixture is not classified as specific target organ toxicant, repeated exposure.

#### **Flumethrin:**

Assessment: The substance or mixture is not classified as specific target organ toxicant, repeated exposure.

### **Aspiration toxicity**

#### **Components:**

#### **Acetone:**

May be harmful if swallowed and enters airways.

### **Further information**

#### **Components:**

#### **Acetone:**

Remarks: If inhaled  
Headache  
drowsiness

Remarks: Inhalation of vapours in high concentration can cause narcotic effects and metabolic acidosis.

#### **Flumethrin:**

Pharmaceutic effects  
Remarks: Antiparasitic agent

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## SECTION 12. ECOLOGICAL INFORMATION

### **Ecotoxicity**

#### **Components:**

#### **Polyethylene:**

#### **Ecotoxicology Assessment**

Acute aquatic toxicity : This product has no known ecotoxicological effects.

#### **Acetone:**



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Toxicity to microorganisms : EC10 (Pseudomonas putida): 1.700 mg/l

### Ecotoxicology Assessment

Acute aquatic toxicity : slightly hazardous to water

### Flumethrin:

Toxicity to fish : LC50 (Oncorhynchus mykiss (rainbow trout)): 0,17 mg/l  
Exposure time: 96 h  
Test Type: Acute Fish toxicity  
Method: OECD 203

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 0,0027 mg/l  
Exposure time: 48 h  
Method: OECD 202

Toxicity to algae : IC50 (Desmodesmus subspicatus (green algae)): 0,59 mg/l  
Exposure time: 72 h  
Method: OECD 201

### Persistence and degradability

#### Components:

#### **Polyethylene:**

Biodegradability : Result: Not readily biodegradable.

#### **Acetone:**

Biodegradability : aerobic  
Biodegradation: 84 %  
Exposure time: 20 d  
Remarks: According to the results of tests of biodegradability this product is considered as being readily biodegradable.

Biochemical Oxygen Demand (BOD) : Biochemical oxygen demand within 5 days  
810 mg/g

Chemical Oxygen Demand (COD) : 1.920 mg/g

BOD/COD : BOD/COD: 0,96 %

#### **Flumethrin:**

Biodegradability : Result: Not rapidly biodegradable  
Biodegradation: 0 %  
Exposure time: 28 d  
Method: OECD 301F

### Bioaccumulative potential

#### Components:

#### **Polyethylene:**

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Bioaccumulation : Remarks: Bioaccumulation is unlikely.

### **Acetone:**

Partition coefficient: n-octanol/water : log Pow: -0,24  
Method: experimental

### **Flumethrin:**

Partition coefficient: n-octanol/water : log Pow: 6,2

### **Mobility in soil**

No data available

### **Other adverse effects**

### **Product:**

Additional ecological information : Do not allow to enter surface waters or groundwater. Due to the polymer matrix is an immediate environmental hazards caused by the active substance in the accident - not to be expected.

### **Components:**

#### **Polyethylene:**

Results of PBT and vPvB assessment : This substance is not considered to be persistent, bioaccumulating and toxic (PBT). This substance is not considered to be very persistent and very bioaccumulating (vPvB).

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## SECTION 13. DISPOSAL CONSIDERATIONS

### **Disposal methods**

Waste from residues : Dispose of as hazardous waste in compliance with local and national regulations.

Contaminated packaging : Contaminated, empty containers are to be treated in the same way as the contents.

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## SECTION 14. TRANSPORT INFORMATION

### **International Regulations**

#### **IATA-DGR**

Not regulated as a dangerous good

#### **IMDG-Code**

Not regulated as a dangerous good

#### **Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code**

Not applicable for product as supplied.

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### National Regulations

## SECTION 15. REGULATORY INFORMATION

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

### HSNO Approval Number

HSR000756

### HSNO Controls

Approved handler certificate not required.

HSNO tracking not required.

Refer to EPA user guide to the HSNO control regulations for further information.

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

NZIoC : On the inventory, or in compliance with the inventory

## SECTION 16. OTHER INFORMATION

### Full text of other abbreviations

AICS - Australian Inventory of Chemical Substances; ANTT - National Agency for Transport by Land of Brazil; ASTM - American Society for the Testing of Materials; bw - Body weight; CMR - Carcinogen, Mutagen or Reproductive Toxicant; CPR - Controlled Products Regulations; DIN - Standard of the German Institute for Standardisation; DSL - Domestic Substances List (Canada); 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; ERG - Emergency Response Guide; 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; Nch - Chilean Norm; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NOM - Official Mexican Norm; NTP - National Toxicology Program; 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; SADT - Self-Accelerating Decomposition Temperature; SDS - Safety Data Sheet; TCSI - Taiwan Chemical Substance Inventory; TDG - Transportation of Dangerous Goods; TSCA - Toxic Substances Control Act (United States); UN - United Nations; UNRTDG - United Nations Recommendations on the Transport of Dangerous Goods; vPvB - Very Persistent and Very Bioaccumulative; WHMIS - Workplace Hazardous Materials Information System

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|                   |   |  |
|-------------------|---|--|
| Date format       | : | dd.mm.yyyy   |
| ACGIH             | : | USA. ACGIH Threshold Limit Values (TLV)                                |
| ACGIH BEI         | : | ACGIH - Biological Exposure Indices (BEI)                              |
| NZ BEI            | : | New Zealand. Biological Exposure Indices                               |
| NZ OEL            | : | New Zealand. Workplace Exposure Standards for Atmospheric Contaminants |
| ACGIH / TWA       | : | 8-hour, time-weighted average  |
| ACGIH / STEL      | : | Short-term exposure limit  |
| NZ OEL / WES-TWA  | : | Workplace Exposure Standard - Time Weighted average                    |
| NZ OEL / WES-STEL | : | Workplace Exposure Standard - Short-Term Exposure Limit                |

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