

# Safety data sheet

BASF Safety Data Sheet  
Date / Revised: 14.08.2017  
Product: **ARIETTA**<sup>®</sup>

(Ref. 30274393/SDS\_CPA\_00/EN; Version 2.0)

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

### 1.1 Product identifier

**ARIETTA**<sup>®</sup>

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

Relevant identified uses: crop protection product, herbicide

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

Company:

BASF New Zealand Limited  
Level 4, 4 Leonard Isitt Drive, Auckland Airport, Auckland 2022  
P.O. Box 407, Auckland 1140  
Phone: +9 255 4300  
Fax: +9 255 4307  
E-mail address: reception@basf-nz.co.nz

### 1.4 Emergency telephone number

**National Poisons Centre: 0800 764 766**

BASF Emergency Advice Number: 0800 944 955 (24 Hour Advice in an Emergency Only)

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## SECTION 2: Hazards Identification

### 2.1 Classification of the substance or mixture

Hazard Classification (NZ EPA)  
6.8B, 6.9A, 9.1A, 9.2A, 9.3C

### 2.2 Label Elements

Pictogram:



Priority Identifier: Warning

**Secondary Identifiers:**

- |      |                                                                                             |
|------|---------------------------------------------------------------------------------------------|
| 6.8B | TOXIC. May damage the unborn child.                                                         |
| 6.9A | TOXIC. May cause damage to organs through prolonged or repeated exposure.                   |
| 9.1A | VERY TOXIC TO AQUATIC LIFE. May cause long-term adverse effects in the aquatic environment. |
| 9.2A | VERY TOXIC TO THE SOIL ENVIRONMENT. Selective herbicide.                                    |
| 9.3C | HARMFUL TO TERRESTRIAL VERTEBRATES.                                                         |

To avoid risks to human health and the environment, comply with the instructions for use.  
Hazard determining component(s) for labelling: TOPRAMEZONE

**2.3. Other hazards**

See section 12 - Results of PBT and vPvB assessment.

If applicable information is provided in this section on other hazards which do not result in classification but which may contribute to the overall hazards of the substance or mixture.

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**SECTION 3: Composition/Information on Ingredients****3.1 Substances**

Not applicable.

**3.2 Mixtures**Chemical nature

Crop protection product, herbicide, suspension concentrate (SC).

Hazardous ingredients

Topramezone (ISO); Methanone, [3-(4,5-dihydro-3-isoxazolyl)-2-methyl-4-(methylsulfonyl)phenyl](5-hydroxy-1-methyl-1H-pyrazol-4-yl)-

Content (W/W): 29.7 %

CAS Number: 210631-68-8

For the classifications not written out in full in this section, including the hazard classes and the hazard statements, the full text is listed in section 16.

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**SECTION 4: First-Aid Measures****4.1 Description of first aid measures**

First aid personnel should pay attention to their own safety. If the patient is likely to become unconscious, place and transport in stable sideways position (recovery position). Immediately remove contaminated clothing.

If inhaled: Keep patient calm, remove to fresh air, seek medical attention.

On skin contact: Wash thoroughly with soap and water, seek medical attention.

On contact with eyes: Wash affected eyes for at least 15 minutes under running water with eyelids held open.

On ingestion: Rinse mouth immediately and then drink plenty of water, induce vomiting, seek medical attention.

**4.2. Most important symptoms and effects, both acute and delayed**

Symptoms: The most important known symptoms and effects are described in the labelling (see section 2) and/or in section 11. Further important symptoms and effects are so far not known.

**4.3. Indication of any immediate medical attention and special treatment needed**

Treatment: Treat according to symptoms (decontamination, vital functions), no known specific antidote.

## SECTION 5: Fire-Fighting Measures

### 5.1. Extinguishing media

Suitable extinguishing media:  
Water spray, foam, dry powder, carbon dioxide.

### 5.2. Special hazards arising from the substance or mixture

Carbon monoxide, Carbon dioxide, nitrogen oxides, sulphur oxides.  
The substances/groups of substances mentioned can be released in case of fire.

### 5.3. Advice for fire-fighters

Special protective equipment:  
Wear self-contained breathing apparatus and chemical-protective clothing.

Further information:

In case of fire and/or explosion do not breathe fumes. Keep containers cool by spraying with water if exposed to fire. Collect contaminated extinguishing water separately, do not allow to reach sewage or effluent systems. Dispose of fire debris and contaminated extinguishing water in accordance with official regulations.

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## SECTION 6: Accidental Release Measures

### 6.1 Personal precautions, protective equipment and emergency procedures

Do not breathe vapour/spray. Use personal protective clothing. Avoid contact with the skin, eyes and clothing.

### 6.2 Environmental precautions

Do not discharge into drains/surface waters/groundwater. Do not discharge into the subsoil/soil.

### 6.3 Methods and material for containment and cleaning up

For small amounts: Pick up with suitable absorbent material (e.g. sand, sawdust, general-purpose binder, kieselguhr).

For large amounts: Dike spillage. Pump off product.

Dispose of absorbed material in accordance with regulations. Collect waste in suitable containers, which can be sealed and labelled for disposal. Clean contaminated floors and objects thoroughly with water and detergents, observing environmental regulations. Wear suitable protective equipment.

### 6.4 Reference to other sections

Information regarding exposure controls/personal protection and disposal considerations can be found in section 8 and 13.

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## SECTION 7: Handling and Storage

### 7.1 Precautions for safe handling

No special measures necessary if stored and handled correctly. Ensure thorough ventilation of stores and work areas. When using do not eat, drink or smoke. Hands and/or face should be washed before breaks and at the end of the shift. Remove contaminated clothing and protective equipment before entering eating areas.

Protection against fire and explosion:

No special precautions necessary. The substance/product is non-combustible. Product is not explosive.

APPROVED HANDLER:

This product must be under the personal control of an APPROVED HANDLER or secured.

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## RECORD KEEPING

Records of use must be kept.

## 7.2 Conditions for safe storage, including any incompatibilities

Segregate from foods and animal feeds.

Further information on storage conditions: Keep away from heat. Protect from direct sunlight.

Storage stability:

Storage duration: 60 Months

Protect from temperatures below: 0 °C

The product can crystallize below the limit temperature.

Protect from temperatures above: 40 °C

Changes in the properties of the product may occur if substance/product is stored above indicated temperature for extended periods of time.

**AGGREGATE STORAGE VOLUME THRESHOLDS:** When stored with substances of the same hazard the aggregate quantity must be considered. For full details refer to the current standard NZS8409 Management of Agrichemicals or the HSNO Regulations.

| Location Certificate*: | Hazardous Atmosphere Zone*: | Fire Extinguishers: | Signage [Hazard Class & Emergency Action]: | Emergency Information | Emergency Response Plan: | Secondary Containment: |
|------------------------|-----------------------------|---------------------|--------------------------------------------|-----------------------|--------------------------|------------------------|
| NA                     | NA                          | NA                  | 100 litres                                 | 1 litre               | 100 litres               | 100 litres             |

\* Note: Farms  $\geq$  4 ha are exempt but with controls

**DO NOT STORE OR LOAD WITH:**  
Class 1 Explosive

**SEGREGATE FROM:**  
Foodstuffs and Food Containers

**Segregation:** In store separate by at least 5 metres, on transport separate by at least 3 metres, in both cases horizontally. On vehicles, a segregation device may be used: Check the Land Transport Rule Dangerous Goods, Rule 45001 for additional information. Sea transport may require additional segregation. Refer to NZS5433 Sea Segregation for details.

Note: Storage, application and record keeping must be as described in the current version of the New Zealand Standard for the Management of Agrichemicals NZS8409

## 7.3 Specific end use(s)

For the relevant identified use(s) listed in Section 1 the advice mentioned in this section 7 is to be observed.

## SECTION 8: Exposure Controls/Personal Protection

### 8.1 Control parameters

Components with occupational exposure limits

57-55-6: Propane-1,2-diol.

### 8.2 Exposure controls

Personal protective equipment

Respiratory protection:

Suitable respiratory protection for lower concentrations or short-term effect: Combination filter for gases/vapours of organic, inorganic, acid inorganic, alkaline compounds and toxic particles (e.g. EN 14387 Type ABEK-P3).

Hand protection:

Suitable chemical resistant safety gloves (EN 374) also with prolonged, direct contact (Recommended: Protective index 6, corresponding > 480 minutes of permeation time according to EN 374): e.g. nitrile rubber (0.4 mm), chloroprene rubber (0.5 mm), butyl rubber (0.7 mm) etc.

Eye protection:

Safety glasses with side-shields (frame goggles) (e.g. EN 166).

**Body protection:**

Body protection must be chosen depending on activity and possible exposure, e.g. apron, protecting boots, chemical-protection suit (according to EN 14605 in case of splashes or EN ISO 13982 in case of dust).

**General safety and hygiene measures**

The statements on personal protective equipment in the instructions for use apply when handling crop protection agents in final-consumer packing. Wearing of closed work clothing is recommended.

Store work clothing separately. Keep away from food, drink and animal feeding stuffs.

**SECTION 9: Physical and Chemical Properties****9.1 Information on basic physical and chemical properties**

|                                                        |                                                                                                                                                                                                        |
|--------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Form:                                                  | suspension                                                                                                                                                                                             |
| Colour:                                                | off-white                                                                                                                                                                                              |
| Odour:                                                 | aromatic                                                                                                                                                                                               |
| Odour threshold:                                       | Not determined due to potential health hazard by inhalation.                                                                                                                                           |
| pH value:                                              | approx. 2,5 - 4,5 (CIPAC standard water D, 1 %(m), 20 °C)                                                                                                                                              |
| crystallization temperature:                           | approx. -4 °C                                                                                                                                                                                          |
| Boiling point:                                         | approx. 100 °C                                                                                                                                                                                         |
| Flash point:                                           | No flash point - Measurement made up to the boiling point.<br>(Directive 92/69/EEC, A.9)                                                                                                               |
| Evaporation rate:                                      | not applicable                                                                                                                                                                                         |
| Flammability:                                          | Study does not need to be conducted.                                                                                                                                                                   |
| Lower explosion limit:                                 | As a result of our experience with this product and our knowledge of its composition we do not expect any hazard as long as the product is used appropriately and in accordance with the intended use. |
| Upper explosion limit:                                 | As a result of our experience with this product and our knowledge of its composition we do not expect any hazard as long as the product is used appropriately and in accordance with the intended use. |
| Ignition temperature:                                  | 425 °C (Directive 92/69/EEC, A.15)                                                                                                                                                                     |
| Vapour pressure:                                       | approx. 23,3 hPa (20 °C) Information applies to the solvent.                                                                                                                                           |
| Density:                                               | approx. 1,12 g/cm <sup>3</sup> (20 °C)                                                                                                                                                                 |
| Relative vapour density (air):                         | not applicable                                                                                                                                                                                         |
| Solubility in water:                                   | dispersible                                                                                                                                                                                            |
| Partitioning coefficient<br>n-octanol/water (log Kow): | not applicable                                                                                                                                                                                         |
| Thermal decomposition:                                 | 210 °C, 330 kJ/kg<br>Not a substance liable to self-decomposition according to UN transport regulations, class 4.1.                                                                                    |
| Viscosity, dynamic:                                    | approx. 78 mPa.s (20 °C, 100 1/s)                                                                                                                                                                      |
| Explosion hazard:                                      | not explosive                                                                                                                                                                                          |
| Fire promoting properties:                             | not fire-propagating                                                                                                                                                                                   |

**9.2 Other information****Other Information:**

If necessary, information on other physical and chemical parameters is indicated in this section.

**SECTION 10: Stability and Reactivity****10.1 Reactivity**

No hazardous reactions if stored and handled as prescribed/indicated.

**10.2 Chemical stability**

The product is stable if stored and handled as prescribed/indicated.

### 10.3 Possibility of hazardous reactions

No hazardous reactions if stored and handled as prescribed/indicated.

### 10.4 Conditions to avoid

See SDS section 7 - Handling and storage.

### 10.5 Incompatible materials

Substances to avoid:  
Strong acids, strong bases, strong oxidizing agents.

### 10.6 Hazardous decomposition products

Hazardous decomposition products:  
No hazardous decomposition products if stored and handled as prescribed/indicated.

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## SECTION 11: Toxicological Information

### 11.1 Information on toxicological effects

#### Acute toxicity

Assessment of acute toxicity:  
Virtually nontoxic after a single ingestion. Virtually nontoxic by inhalation. Virtually nontoxic after a single skin contact. The product has not been tested. The statement has been derived from substances/products of a similar structure or composition.

Experimental/calculated data:  
LD50 rat (oral): > 2,000 mg/kg (OECD Guideline 423)  
No mortality was observed.

LC50 rat (by inhalation): > 5,8 mg/l 4 h (OECD Guideline 403)  
No mortality was observed. An aerosol was tested.

LD50 rat (dermal): > 4,000 mg/kg (OECD Guideline 402)  
No mortality was observed.

#### Irritation

Assessment of irritating effects:  
Not irritating to the eyes. Not irritating to the skin. The product has not been tested. The statement has been derived from substances/products of a similar structure or composition.

Experimental/calculated data:  
Skin corrosion/irritation rabbit: non-irritant (OECD Guideline 404)  
Serious eye damage/irritation rabbit: non-irritant (OECD Guideline 405)

#### Respiratory/Skin sensitization

The product has not been tested. The statement has been derived from substances/products of a similar structure or composition. There is no evidence of a skin-sensitizing potential.

Experimental/calculated data:  
Mouse Local Lymph Node Assay (LLNA) mouse: Skin sensitizing effects were not observed in animal studies. (OECD Guideline 429).

#### Germ cell mutagenicity

Assessment of mutagenicity:  
The product has not been tested. The statement has been derived from the properties of the individual components. Mutagenicity tests revealed no genotoxic potential.

### Carcinogenicity

#### Assessment of carcinogenicity:

The product has not been tested. The statement has been derived from the properties of the individual components.

*Information on: topramezone (ISO); Methanone, [3-(4,5-dihydro-3-isoxazolyl)-2-methyl-4-(methylsulfonyl)phenyl](5-hydroxy-1-methyl-1H-pyrazol-4-yl)-*

#### *Assessment of carcinogenicity:*

*When given in high doses, the substance was carcinogenic in animal studies. Based on its mechanism of action, a carcinogenic potential is not expected after exposure to low doses.*

### Reproductive toxicity

#### Assessment of reproduction toxicity:

The product has not been tested. The statement has been derived from the properties of the individual components. The results of animal studies gave no indication of a fertility impairing effect.

### Developmental toxicity

#### Assessment of teratogenicity:

The product has not been tested. The statement has been derived from the properties of the individual components. Animal studies gave no indication of a developmental toxic effect at doses that were not toxic to the parental animals.

*Information on: topramezone (ISO); Methanone, [3-(4,5-dihydro-3-isoxazolyl)-2-methyl-4-(methylsulfonyl)phenyl](5-hydroxy-1-methyl-1H-pyrazol-4-yl)-*

#### *Assessment of teratogenicity:*

*May cause harm to the unborn child.*

### Specific target organ toxicity (single exposure)

#### Assessment of STOT single:

Based on the available information there is no specific target organ toxicity to be expected after a single exposure.

Remarks: The product has not been tested. The statement has been derived from the properties of the individual components.

### Repeated dose toxicity and Specific target organ toxicity (repeated exposure)

#### Assessment of repeated dose toxicity:

The product has not been tested. The statement has been derived from the properties of the individual components.

*Information on: topramezone (ISO); Methanone, [3-(4,5-dihydro-3-isoxazolyl)-2-methyl-4-(methylsulfonyl)phenyl](5-hydroxy-1-methyl-1H-pyrazol-4-yl)-*

#### *Assessment of repeated dose toxicity:*

*Adaptive effects were observed after repeated exposure in animal studies.*

### Aspiration hazard

No aspiration hazard expected.

The product has not been tested. The statement has been derived from the properties of the individual components.

### Other relevant toxicity information

Misuse can be harmful to health.

## SECTION 12: Ecological Information

### 12.1 Toxicity

Assessment of aquatic toxicity:

Very toxic to aquatic life with long lasting effects.

The product has not been tested. The statement has been derived from substances/products of a similar structure or composition.

Toxicity to fish:

LC50 (96 h) 8,71 mg/l, *Oncorhynchus mykiss*

Aquatic invertebrates:

EC50 (48 h) 12,1 mg/l, *Daphnia magna*

Aquatic plants:

EC50 (7 d) > 0,064 mg/l (growth rate), *Lemna gibba* (OECD guideline 221)

EC50 (7 d) 0,0008 mg/l (growth rate), *Lemna gibba* (OECD guideline 221)

Chronic toxicity to aquatic invertebrates:

No observed effect concentration (35 d) 0,12 mg/l, *Mysidopsis bahia*

### 12.2 Persistence and degradability

Assessment biodegradation and elimination (H<sub>2</sub>O):

The product has not been tested. The statement has been derived from the properties of the individual components.

*Information on: topramezone (ISO); Methanone, [3-(4,5-dihydro-3-isoxazolyl)-2-methyl-4-(methylsulfonyl)phenyl](5-hydroxy-1-methyl-1H-pyrazol-4-yl)-*

*Assessment biodegradation and elimination (H<sub>2</sub>O):*

*Not readily biodegradable (by OECD criteria).*

### 12.3 Bioaccumulative potential

Assessment bioaccumulation potential:

The product has not been tested. The statement has been derived from the properties of the individual components.

*Information on: topramezone (ISO); Methanone, [3-(4,5-dihydro-3-isoxazolyl)-2-methyl-4-(methylsulfonyl)phenyl](5-hydroxy-1-methyl-1H-pyrazol-4-yl)-*

*Bioaccumulation potential:*

*Bioconcentration factor: 0,69 (42 d), *Lepomis macrochirus* (OPPTS 850.1730 (EPA Guideline))*

*Does not significantly accumulate in organisms.*

### 12.4 Mobility in soil

Assessment transport between environmental compartments:

Adsorption in soil: The product has not been tested. The statement has been derived from the properties of the individual components.

*Information on: topramezone (ISO); Methanone, [3-(4,5-dihydro-3-isoxazolyl)-2-methyl-4-(methylsulfonyl)phenyl](5-hydroxy-1-methyl-1H-pyrazol-4-yl)-*

*Assessment transport between environmental compartments:*

*Adsorption in soil: Following exposure to soil, the product trickles away and can - dependant on degradation - be transported to deeper soil areas with larger water loads.*



### 12.5 Results of PBT and vPvB assessment

The product does not contain a substance fulfilling the PBT (persistent/bioaccumulative/toxic) criteria or the vPvB (very persistent/very bioaccumulative) criteria.

### 12.6 Other adverse effects

The product does not contain substances that are listed in the Montreal Protocol on substances that deplete the ozone layer.

### 12.7 Additional information

Other ecotoxicological advice:

Do not discharge product into the environment without control.

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## SECTION 13: Disposal Considerations

### 13.1. Waste treatment methods

#### Container:

Triple rinse empty container and add residue to the spray tank. Recycle the rinsed container through Agrecovery (0800 247 326, [www.agrecovery.co.nz](http://www.agrecovery.co.nz)).

#### Contaminated packaging:

Contaminated packaging should be emptied as far as possible and buried in an approved landfill.

#### Product:

Dispose of this product only by using according to the label, or at an approved landfill, or at an approved facility. DO NOT burn product. DO NOT contaminate water with product or used container.

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## SECTION 14: Transport Information

#### Commercial transport:

Classified as Dangerous Goods for Land/rail (ADR/RID), sea (IMDG/GGVSee) and air transport (ICAO/IATA):

|                               |                                                                               |
|-------------------------------|-------------------------------------------------------------------------------|
| UN number:                    | UN 3082                                                                       |
| UN proper shipping name:      | ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.<br>(contains TOPRAMEZONE) |
| Transport hazard class(es):   | 9, EHSM                                                                       |
| Packing group:                | III                                                                           |
| Environmental hazards:        | Yes                                                                           |
| Marine pollutant:             | YES                                                                           |
| Special precautions for user: | None known                                                                    |
| HAZCHEM:                      | 2[Z]                                                                          |

#### Public transport:

Do NOT carry this product on a passenger service vehicle.

### 14.1. UN number

See corresponding entries for "UN number" for the respective regulations in the tables above.

### 14.2. UN proper shipping name

See corresponding entries for "UN proper shipping name" for the respective regulations in the tables above.

### 14.3. Transport hazard class(es)

See corresponding entries for "Transport hazard class(es)" for the respective regulations in the tables above.

### 14.4. Packing group

See corresponding entries for "Packing group" for the respective regulations in the tables above.

#### 14.5. Environmental hazards

See corresponding entries for "Environmental hazards" for the respective regulations in the tables above.

#### 14.6. Special precautions for user

See corresponding entries for "Special precautions for user" for the respective regulations in the tables above.

#### 14.7. Transport in bulk according to Annex II of MARPOL and the IBC Code

Regulation: Not evaluated  
Shipment approved: Not evaluated  
Pollution name: Not evaluated  
Pollution category: Not evaluated  
Ship Type: Not evaluated

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### SECTION 15: Regulatory Information

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

To avoid risks to man and the environment, comply with the instructions for use.

##### NZ Regulations

Approved pursuant to the HSNO Act 1996, Code HSR100903.

See [www.epa.govt.nz](http://www.epa.govt.nz) for approval conditions.

Registered pursuant to the ACVM Act 1997, No. P8825.

See [www.foodsafety.govt.nz](http://www.foodsafety.govt.nz) for registration conditions.

#### 15.2 Chemical Safety Assessment

Advice on product handling can be found in sections 7 and 8 of this safety data sheet.

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### SECTION 16: Other Information

For proper and safe use of this product, please refer to the approval conditions laid down on the product label.

The data contained in this safety data sheet are based on our current knowledge and experience and describe the product only with regard to safety requirements. This safety data sheet is neither a Certificate of Analysis (CoA) nor technical data sheet and shall not be mistaken for a specification agreement. Identified uses in this safety data sheet do neither represent an agreement on the corresponding contractual quality of the substance/mixture nor a contractually designated use. It is the responsibility of the recipient of the product to ensure any proprietary rights and existing laws and legislation are observed.

| Vertical lines in the left-hand margin indicate an amendment from the previous version.