

# Safety Data Sheet

BASF Safety Data Sheet

Date / Revised: 31.08.2023

Product: **ARIETTA®**

Version: 4.0

(Ref. 30265086/SDS\_CPA\_NZ/EN)

## 1. Identification

### Product identifier

**ARIETTA®**

### Recommended uses and restrictions on use (if any)

#### Recommended use:

crop protection product, herbicide.

#### Restricted use:

not applicable

### Manufacturer / Supplier

BASF New Zealand Limited  
5E City Works Depot,  
77 Cook Street  
Auckland 1010  
NEW ZEALANDPhone: + 64 9 255 4300  
0800 932 273  
E-mail address: reception@basf-nz.co.nz

### Emergency telephone number

National Poisons Centre: 0800 764 766  
BASF Emergency Advice Number: 0800 944 955 (24 hour advice in an emergency only)

## 2. Hazard Identification

### Classification of the substance or mixture

Reproductive toxicity : Category 2  
Specific target organ toxicity - repeat exposure : Category 1  
Aquatic environment - acute : Category 1  
Aquatic environment - chronic : Category 1  
Hazardous to soil organisms  
Hazardous to terrestrial vertebrates

### GHS Label Elements, including Precautionary Statements:

Signal Word:  
DANGER

Pictograms:GHS Hazard Statements

H361	:	Suspected of damaging fertility or the unborn child.
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.
	:	Hazardous to soil organisms.
	:	Hazardous to terrestrial vertebrates.

GHS Precautionary Statements (Prevention)

P103	:	Read label before use.
P201	:	Obtain special instructions before use.
P202	:	Do not handle until all safety precautions have been read and understood.
P260	:	Do not breathe mist, vapours and spray.
P264	:	Wash hands and face thoroughly after handling.
P270	:	Do not eat, drink or smoke when using this product.
P281	:	Use personal protective equipment as required.

GHS Precautionary Statements (Response)

P308 + P313	:	IF exposed or concerned: Get medical advice/attention.
P314	:	Get medical advice / attention if you feel unwell.
P391	:	Collect spillage.

GHS Precautionary Statements (Storage)

P405	:	Store locked up
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GHS Precautionary Statements (Disposal):

P501	:	Dispose of contents/container to hazardous or special waste collection point. Information regarding disposal considerations can be found in section 13.
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**According to UN GHS criteria**

Hazard determining component(s) for labelling: topramezone

**Other hazards**

No other hazards known.

See section 12 - Results of PBT and vPvB assessment.

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

**3. Composition/Information on Ingredients****Substances**

Not applicable

**Mixtures**Hazardous ingredients (GHS)

According to UN GHS criteria

Topramezone		
Content (W/W):		29.7 %
CAS Number:		210631-68-8

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Benzenesulfonic acid, hydroxy-, polymer with formaldehyde, phenol and urea,sodium salt

Content (W/W): &lt;3%

CAS Number: 102980-04-1

propane-1,2-diol

Content (W/W): &lt;10%

CAS Number: 57-55-6

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## 4. First-Aid Measures

### Description of necessary first aid measures

#### General advice:

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:

Immediately 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:

Immediately rinse mouth and then drink 200-300 ml of water, seek medical attention.

### Most important symptoms and effects, both acute and delayed

#### Symptoms:

Information, i.e. additional information on symptoms and effects may be included in the GHS labelling phrases available in Section 2 and in the Toxicological assessments available in Section 11., (Further) symptoms and / or effects are not known so far.

### Indication of any immediate medical attention and special treatment needed

#### Treatment:

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

#### Medical advice:

Contact the National Poisons and Hazardous Chemicals Information centre.

Phone 0800 POISON (0800 764 766).

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## 5. Fire-Fighting Measures

### Suitable extinguishing media

Water spray, foam, dry powder, carbon dioxide

### Unsuitable extinguishing media for safety reasons

Water jet

### Specific hazards

carbon monoxide, carbon dioxide, hydrogen chloride, nitrogen oxides, sulphur oxides, halogenated compounds.

The substances/groups of substances mentioned can be released in case of fire.

The substance is non-combustible. Product is not explosive.

**Special protective equipment for fire-fighters**

Wear self-contained breathing apparatus and chemical-protective clothing.

**Precautions for fire-fighters**

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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## 6. Accidental Release Measures

**Personal precautions, Protective equipment and Emergency procedures**

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

**Environmental precautions**

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

**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 labelled and sealed. Clean contaminated floors and objects thoroughly with water and detergents, observing environmental regulations.

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## 7. Handling and Storage

**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.

**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: 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.

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## 8. Exposure Controls/Personal Protection

### Control parameters

#### Occupational exposure limits

Component:	propane-1,2-diol
CAS Number:	57-55-6
TWA Value (particulates only):	10 mg/m <sup>3</sup> (source: WES 2022)
TWA Value (vapour and particulates):	150 ppm / 474 mg/m <sup>3</sup> (source: WES 2022)

### Engineering controls

Maintain air concentrations below occupational exposure standards.

### 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 and alkaline compounds (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.

## 9. Physical and Chemical Properties

Form:	Liquid
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)
Crystallisation temperature:	Approx. -4°C
Boiling point:	Approx. 100°C
Flash point:	No flash point Measurement made up to the boiling point.
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.

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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
Thermal decomposition:	210°C, 330 kJ/kg Not a substance liable to self-decomposition according to UN transport regulations, Class 4.1
Explosion hazard:	Not explosive
Fire promoting properties:	Not fire propagating
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 n-octanol/water (log Kow):	Not applicable
Viscosity, dynamic:	Approx. 78 mPa.s (20°C, 100 1/s)

## 10. Stability and Reactivity

### Reactivity

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

### Chemical stability

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

### Possibility of hazardous reactions

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

### Conditions to avoid

Avoid excessive temperatures. Avoid direct sunlight. See SDS section 7 - Handling and storage.

### Incompatible materials / Substances to avoid

Strong acids, strong bases, strong oxidizing agents

### Hazardous decomposition products

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

Thermal decomposition: 210°C, 330 kJ/kg

Thermal decomposition: Not a substance liable to self decomposition according to UN Transport Regulations, Class 4.1.

## 11. Toxicological Information

### Acute toxicity

#### Assessment of acute toxicity:

Virtually nontoxic after a single ingestion. Virtually nontoxic after 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): > 2000 mg/kg  
No mortality was observed.

LC50 rat (by inhalation): >5.8 mg/l 4 h  
No mortality was observed. An aerosol was tested.

LD50 rat (dermal): >4000 mg/kg  
No mortality was observed.

### **Skin Corrosion / Irritation**

#### Assessment of irritating effects:

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.

### **Serious Eye Damage / Irritation**

#### Assessment of irritating effects:

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

#### Experimental/calculated data:

Serious eye damage/irritation rabbit: non-irritant.

### **Respiratory or Skin sensitization**

#### Assessment of 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-sensitising potential.

#### Experimental/calculated data:

Mouse Local Lymph Node Assay (LLNA) mouse: non-sensitizing. Skin sensitizing effects were not observed in animal studies.

### **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

#### 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.

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Information on: Topramezone  
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  
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.

## **12. Ecological Information**

### **Ecotoxicity - Aquatic**

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*  
 NOEC (35 d) (chronic): 0.12 mg/l (*Mysidopsis bahia*)

Aquatic plants:  
 EC50 (7 d) >0.064 mg/l (growth rate), *Lemna gibba*  
 EC50 (7 d) 0.0008 mg/l (growth rate), *Lemna gibba*

### **Ecotoxicity - Terrestrial**

Assessment of terrestrial toxicity:  
 Harmful to terrestrial vertebrates.  
 The product has not been tested. The statement has been derived from the properties of active ingredient, Topramezone.



Toxicity to birds:

Acute oral LD50: >2000 mg ai/kg bw; Bobwhite Quail (Topramezone)

Toxicity to soil organisms:

LC50 (14d) >1000 mg ai/kg soil, Earthworm: *Eisenia fetida* (Topramezone)

Toxicity to Pollinators:

LD50 (48h, oral): 68 µg ai/bee, *Apis mellifera* (Topramezone)

LD50 (48h, contact): >88.5 µg ai/bee, *Apis mellifera* (Topramezone)

**Persistence and degradability**Assessment biodegradation and elimination (H2O):

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

Information on: Topramezone

Assessment biodegradation and elimination (H2O):

Not readily biodegradable.

**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

Bioaccumulation potential

Bioconcentration factor: 0.69 (42 d), *Lepomis macrochirus*

Does not significantly accumulate in organisms.

**Mobility in soil**Assessment transport between environmental compartments:

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

Information on: Topramezone

Assessment transport between environmental compartments:

Following exposure to soil, the product trickles away and can - dependent on degradation - be transported to deeper soil areas with larger water loads.

**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.

**Other adverse effects**Other ecotoxicological advice:

Do not discharge product into the environment without control.

Do not apply onto or into water.

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**13. Disposal Considerations****Container:**

Triple rinse empty container and add rinsate to the spray tank. Recycle through Agrecovery (0800 247 326, [www.agrecovery.co.nz](http://www.agrecovery.co.nz)). Do not use container for any other purpose.

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**Product:**

Dispose of this product only by using according to the label or at an approved facility. Do NOT burn product. Do NOT contaminate water with product or used container.  
 Waste product/package may be sent to a suitable incineration plant, observing local regulations.

**Contaminated Packaging:**

Contaminated packaging should be emptied as far as possible and disposed of in the same manner as the substance / product.

**14. Transport Information****Commercial transport:**

Classified as a dangerous good for Land/rail (ADR/RID), sea (IMDG) and air transport (ICAO/IATA).

**Land / Rail / Road (ADR/RID):**

UN number:	UN3082
UN proper shipping name:	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (contains TOPRAMEZONE)
Transport hazard class(es):	9, EHSM
Packing group:	III
Environmental hazards:	Marine pollutant
HAZCHEM:	3Z
IERG Number:	47
Special precautions when transporting the substance:	Not applicable

**Sea transport (IMDG):**

UN number:	UN3082
UN proper shipping name:	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (contains TOPRAMEZONE)
Transport hazard class(es):	9, EHSM
Packing group:	III
Marine pollutant:	Yes

**Air transport (IATA / ICAO):**

UN number:	UN3082
UN proper shipping name:	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (contains TOPRAMEZONE)
Transport hazard class(es):	9, EHSM
Packing group:	III

**Additional Information:**

Product may be shipped as non-hazardous in suitable packages containing a net quantity of 5 L or less under the provisions of various regulatory agencies: ADR, RID, ADN: Special Provision 375; IMDG: 2.10.2.7; IATA: A197; TDG: Special Provision 99(2); 49CFR: §171.4 (c) (2) and also the Special Provision 375 in Appendix B which is regulated in China "Regulations Concerning Road Transportation of Dangerous Goods Part 3: Index of dangerous goods name and transportation requirements" (JT/T 617.3)

## 15. Regulatory Information

### HSNO Approval Number

HSR100903.  
 See [www.epa.govt.nz](http://www.epa.govt.nz) for approval conditions.

### Tolerable Exposure Limit or Environmental Exposure Limit

TEL: None set  
 EEL: None set

### Relevant Regulatory Requirements

Qualifications:	Required. Refer to label.
Certified Handler:	Not required
Tracking:	Not required
Record Keeping:	Required. Refer to label.
Restricted to Workplace:	Not applicable.
Controlled substance licence:	Not required

### ACVM Registration

P008825  
 See [www.foodsafety.govt.nz/acvm](http://www.foodsafety.govt.nz/acvm) for registration conditions.

### International Agreements related to the substance such as Montreal Protocol, the Stockholm Convention or Rotterdam Convention

not applicable

## 16. Other Information

### Date of preparation of the SDS

31 August 2023

### Key or legend to abbreviations and acronyms used

ACGIH	The American Conference of Governmental Industrial Hygienists
ACVM	Agricultural Compounds and Veterinary Medicines
ADN	International Carriage of Dangerous Goods by Inland Waterways (EU)
ADR/RID	Dangerous Goods for Road / Rail
DG	Dangerous Goods
EC50	Median effective concentration
EEL	Environmental Exposure Limit
EHSM	Environmental Health and Safety Management
EPA	Environmental Protection Authority
EU	European Union
GHS	Globally Harmonised System
ICAO	International Civil Aviation Organisation
IATA	International Air Transport Association
IERG	International Emergency Response Guide
IMDG	International Maritime Dangerous Goods
LD50	Lethal concentration to 50% of the test population
NOEC	No Observed Effect Concentration
N.O.S.	Not Otherwise Specified
OEL	Operator Exposure Limits
PBT or vPvP	Persistent / Bioaccumulative / Toxic or very Persistent/very Bioaccumulative
SDS	Safety Data Sheet
STOT	Specific Target Organ Toxicity
TDG	Transportation of Dangerous Goods
TEL	Tolerable Exposure Limit

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TLVs

UN GHS

WES

49CFR

Threshold Limit Values

United Nations Globally Harmonised System

Workplace Exposure Standards

Code of Federal Regulations Title 49 for Transportation

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.