

## SAFETY DATA SHEET

According to  
HSNO Hazardous Substances (Safety Data Sheets) Notice 2017

### Section 1. Identification of the material and the supplier

Product: **Argento**  
 Product Use: Fungicide  
 Restriction of Use: Refer to Section 15

New Zealand Supplier: **Adria Crop Protection Solutions**  
 Address: 407 State Highway 16  
 Kumeu 0841,  
 Auckland

Telephone: +64 9 412 9817  
 Fax: +64 9 412 9807  
 Website: www.adria.nz

**Emergency No:** **0800 734 607 (24hr)3**  
**0800 764 766 (National Poison Centre)**

Date of SDS Preparation: 2 June 2020

### Section 2. Hazards Identification

This substance is hazardous according to the EPA Hazardous Substances (Classification) Notice 2017

**EPA Approval No: HSR101376**

#### Pictograms



Chronic



Corrosive



Ecotoxic

Signal Word: **DANGER**

HSNO Classification	Hazard Code	Hazard Statement	GHS Category
6.1E (Oral)	H303	May be harmful if swallowed.	Acute Tox. 5
6.3B	H316	Causes mild skin irritation.	Skin Irrit. 3
6.8B	H361	Suspected of damaging fertility or the unborn child.	Repr. 2
6.9B	H373	May cause damage to organs through prolonged or repeated exposure.	STOT RE 2
8.3A	H318	Causes serious eye damage.	Eye Corr. 1
9.1B	H411	Toxic to aquatic life with long lasting effects.	Aquatic Chronic 2
9.3C	H433	Harmful to terrestrial vertebrates.	-

Prevention Code	Prevention Statement
P102	Keep out of reach of children.
P103	Read label before use.
P201	Obtain special instructions before use.
P260	Do not breathe fumes, vapours or spray.
P273	Avoid release to the environment.
P280	Wear protective clothing detailed in Section 8.
P281	Use personal protective equipment as required.

Response code	Response Statement
P101	If medical advice is needed, have product container or label at hand.
P310	Immediately call a POISON CENTER or doctor/physician.
P391	Collect spillage.
P305 + P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P308 + P313	IF exposed or concerned: Get medical advice/ attention.
P332 + P313	If skin irritation occurs: Get medical advice/ attention.

Storage Code	Storage Statement
P405	Store locked up.

Disposal Code	Disposal Statement
P501	Refer to Section 13.

### Section 3. Composition / Information on Hazardous Ingredients

Ingredients	Content (%w/v)	CAS NUMBER.
Flusulfamide	5.0	106917-52-6
Not hazardous	To bal	

### Section 4. First Aid Measures

Routes of Exposure:

If in Eyes	Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.
If on Skin	Wash affected areas with soap and water. If skin irritation occurs: Get medical advice/attention.
If Swallowed	If swallowed do NOT induce vomiting. Never give anything to an unconscious person. For advice, contact the National Poisons Centre on 0800 POISON (0800 764766) or a doctor immediately.
If Inhaled	Remove person to fresh air. Remove contaminated clothing and loosen remaining clothing. Allow person to assume most comfortable position and keep warm. Keep at rest until fully recovered. Apply artificial respiration if not breathing. Get medical advice if breathing becomes difficult.

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

Symptoms:

**Ingestion:** May be harmful if swallowed.

**Inhalation:** Not applicable.

**Skin:** Causes mild skin irritation.

**Eye:** Causes severe eye damage.

**Chronic:** Suspected of damaging fertility or the unborn child. May cause damage to organs through repeated or prolonged exposure.

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

**Section 5. Fire Fighting Measures**

<b>Hazard Type</b>	This product is not flammable.
<b>Hazards from products</b>	Carbon monoxide, hydrogen chloride, hydrogen fluoride, nitrogen oxides, organochloric compounds.
<b>Suitable Extinguishing media</b>	Water spray, foam, dry extinguishing media, carbon dioxide.
<b>Recommended protective clothing &amp; Precautions for firefighters</b>	Wear SCBA and chemical-protective clothing.
<b>HAZCHEM CODE</b>	<b>3Z</b>

**Section 6. Accidental Release Measures****Personal precautions:**

Use protective clothing as per Section 8. Avoid contact with skin, eyes and clothing. Remove contaminated clothes and shoes immediately.

**Environmental precautions:**

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

**Spill and Disposal procedures:**

Absorb spills with inert material and place in waste containers. Wash area with water and absorb with further inert material. Dispose of waste safely, according to Local Council regulations as detailed in Section 13.

**Section 7. Handling and Storage****Precautions for Handling:**

- Read label before use.
- Obtain special instructions before use.
- Do not handle until all safety precautions have been read and understood.
- Do not breathe fumes, vapours or spray.
- Ensure thorough ventilation of stores and work areas.
- Avoid release to the environment.
- Use personal protective clothing and equipment as required.

**Precautions for Storage:**

- Store away from incompatible materials listed in Section 10.
- Keep out of reach of children.
- Keep away from heat and protect from sunlight.
- Protect against freezing.
- Store locked up.

**Section 8 Exposure Controls / Personal Protection****WORKPLACE EXPOSURE STANDARDS (provided for guidance only)**

Substance	TWA		STEL	
	ppm	mg/m <sup>3</sup>	ppm	mg/m <sup>3</sup>

No ingredients have exposure limits

Workplace Exposure Standard – Time Weighted Average (WES-TWA). The time-weighted average exposure standard designed to protect the worker from the effects of long-term exposure. Workplace Exposure Standard – Short-Term Exposure Limit (WESSTEL). The 15-minute average exposure standard. Applies to any 15- Minute period in the working day and is designed to protect the worker against adverse effects of irritation, chronic or irreversible tissue change, or narcosis that may increase the likelihood of accidents. The WES-STEL is not an alternative to the WES-TWA; both the short-term and time-weighted average exposures apply. Workplace Exposure Standards and Biological Exposure Indices NOV 2019 11TH EDITION.

## Engineering Controls / Industrial Hygiene

Ensure there is sufficient ventilation of the area.

### Personal Protection Equipment



<b>Eyes</b>	Safety goggles with side-shields.
<b>Hands</b>	Wear suitable gloves resistant to chemical penetration e.g. nitrile rubber gloves with a minimum thickness of 0.4 mm.
<b>Skin</b>	Body protection (chemical protection suit, boots) must be chosen depending on activity and possible exposure.
<b>Respiratory</b>	Wear respiratory protection if ventilation is inadequate. Particle filter with medium efficiency for solid and liquid particles.
<b>General</b>	Keep out of reach of children. Wear protective clothing such as impervious gloves, waterproof hat, coat and trousers when using. Avoid contact with skin or eyes and inhalation of spray mist. Wash hands and exposed skin after use and before meals.

### Section 9 Physical and Chemical Properties

<b>Appearance</b>	Liquid
<b>Colour</b>	Off white to light brown
<b>Odour</b>	Characteristic odour
<b>Odour Threshold</b>	No data available
<b>pH</b>	7.5 – 9.5
<b>Boiling Point</b>	No data available
<b>Melting Point</b>	No data available
<b>Freezing Point</b>	No data available
<b>Flash Point</b>	Not applicable
<b>Flammability</b>	Not flammable
<b>Upper and Lower Explosive Limits</b>	No data available
<b>Vapour Pressure</b>	No data available
<b>Vapour Density</b>	No data available
<b>Density</b>	1.031
<b>Water Solubility</b>	No data available
<b>Partition Coefficient:</b>	No data available
<b>Ignition Temperature</b>	No data available
<b>Decomposition Temperature</b>	No data available
<b>Viscosity</b>	No data available
<b>Particle Characteristics</b>	No data available
<b>Surface tension</b>	No data available

### Section 10. Stability and Reactivity

<b>Stability of Substance</b>	This product is stable under normal conditions.
<b>Possibility of hazardous reactions</b>	None known.
<b>Conditions to Avoid</b>	Temperature extremes.
<b>Incompatible Materials</b>	None known.
<b>Hazardous Decomposition Products</b>	None known.

**Section 11 Toxicological Information****Acute Effects:**

<b>Swallowed</b>	May be harmful in inhaled.
<b>Dermal</b>	Not triggered
<b>Inhalation</b>	Not triggered
<b>Eye</b>	Causes serious eye damage.
<b>Skin</b>	Causes mild skin irritation

**Chronic Effects:**

<b>Carcinogenicity</b>	Not triggered
<b>Reproductive Toxicity</b>	Suspected of damaging fertility or the unborn child.
<b>Germ Cell Mutagenicity</b>	Not triggered
<b>Aspiration</b>	Not triggered
<b>STOT/SE</b>	Not triggered
<b>STOT/RE</b>	May cause damage to organs through prolonged or repeated exposure.

**Individual component information:****Acute Toxicity:**

<b>Chemical Name</b>	<b>Oral – LD50</b>	<b>Dermal – LD50</b>	<b>Inhalation – LC50</b>
Flusulfamide (Cas No 106917-52-6)	132mg/kg (female rat) 180mg/kg (Male rat)	>2000mg/kg (Rat)	0.47mg/L (Rat)4h

**Section 12. Ecotoxicological Information**

HSNO Classes: 9.1B = Toxic to aquatic life with long lasting effects.  
9.3C = Harmful to terrestrial vertebrates.

**Based on the active ingredient:**

<b>Ecological effects information</b>	Birds Acute oral LD <sub>50</sub> for bobwhite quail 66 mg/kg Bees LD <sub>50</sub> >200µg/Bee
<b>Persistence and degradability</b>	Aqueous photodegradation DT <sub>50</sub> 3.2 d (25 °C)
<b>Bioaccumulation</b>	No data available
<b>Mobility in Soil</b>	No data available
<b>Other adverse effects</b>	No data available
<b>Acute fish toxicity:</b>	LC <sub>50</sub> (96 h) for carp 0.302 mg/l
<b>Toxicity for daphnia:</b>	EC <sub>50</sub> (48 h) 0.29 mg/l
<b>Toxicity to algae:</b>	E <sub>b</sub> C <sub>50</sub> (72 h) 2.1 mg/l
<b>Precautions:</b>	<b>DO NOT ALLOW TO ENTER WATERWAYS</b>

**Section 13. Disposal Considerations****Disposal Method:**

Triple rinse container and add residue to spray tank. Return empty container to an AgRecovery collection point for disposal.

**Empty container precautions:**

Avoid contamination of any water supply with chemical or empty container.

**Precautions or methods to avoid:** Avoid release to the environment.

This product is classified as a Dangerous Good for transport in NZ; NZS 5433:2012



### Road, Rail, Sea and Air Transport

<b>UN No</b>	3082
<b>Class - Primary</b>	9
<b>Packing Group</b>	III
<b>Proper Shipping Name</b>	<b>ENVIRONMENTALLY HAZARDOUS SUBSTANCE, (Flusulfamide), LIQUID, N.O.S.</b>
<b>Marine Pollutant</b>	Yes
<b>Special Provisions-Limited Quantities</b>	If the product's individual container is below 5L/kg, it can be transported as a non-DG as long as the product packaging is still labelled as per DG requirements and the driver is given safety information in accordance with Chapter 3.4 of the UNRTDG.

### Section 15 Regulatory Information

This substance is classified hazardous according to the EPA Hazardous Substances (Classification) Notice 2017

EPA Approval Code: HSR101376

HSNO Classification: 6.1E (Oral), 6.3B, 6.8B, 6.9B, 8.3A, 9.1B, 9.3C

<b>HSW (HS) Regulations 2017</b>	<b>Trigger Quantity</b>
Certified Handlers	Not required
Location Certificate	Not required
Signage Trigger Quantities (Schedule 3)	1000L (9.1B)
Emergency Response Plan (Schedule 5)	1000L (9.1B)
Secondary Containment (Schedule 5)	1000L (9.1B)
Tracking (Schedule 26)	Not required
For all further controls	Refer to EPA <a href="http://www.epa.govt.nz">www.epa.govt.nz</a> for controls document – HSR101376
<b>HSNO Additional Controls (Restrictions of use)</b>	
77A - A maximum application rate is set for this substance.	The maximum application rate of this substance is 1800 g of flusulfamide/ha (equivalent to 36 L of Argento/ha).  The maximum application frequency and minimum interval period of this substance must not be more than once per calendar year.
77A – A restriction has been placed on the application method for this substance.	This substance must be applied using ground-based methods only.
77A - The following information is recommended to be provided with these products	Information must be provided with tubers coated with this substance that indicates the substance that the tubers have been treated with, its hazardous properties and precautions to be taken in handling the tubers.
<b>Hazardous Property Controls Notice 2017</b>	
HPC Notice Part 1	Hazardous Property Controls preliminary provisions.

HPC Notice Part 4 Subpart B	Use of class 9 substances in any place
HPC Notice Part 3	Hazardous substances in a place other than a workplace.
HPC Notice Part 4 Subpart A	Site and storage controls for class 9 substances
<b>ACVM Act and Regulations</b>	
ACVM Approval No See <a href="http://www.foodsafety.govt.nz">www.foodsafety.govt.nz</a> for registration controls	<b>P7504</b>

## 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 is based on our current knowledge and describes the product only with regard to safety requirements. The data does not describe the products properties. Neither should any agreed property nor the suitability of the product for any specific purpose be deduced from the data contained in the safety data sheet. It is the responsibility of the recipient of the product to ensure any existing laws and legislation are observed.

### Glossary

EC <sub>50</sub>	Median effective concentration.
EEL	Environmental Exposure Limit.
EPA	Environmental Protection Authority
HSNO	Hazardous Substances and New Organisms.
HSW	Health and Safety at Work.
LC <sub>50</sub>	Lethal concentration that will kill 50% of the test organisms inhaling or ingesting it.
LD <sub>50</sub>	Lethal dose to kill 50% of test animals/organisms.
LEL	Lower explosive level.
OSHA	American Occupational Safety and Health Administration.
TEL	Tolerable Exposure Limit.
TLV	Threshold Limit Value-an exposure limit set by responsible authority.
UEL	Upper Explosive Level
WES	Workplace Exposure Limit

### References:

1. EPA Hazardous Substances (Safety Data Sheets) Notice 2017
2. Workplace Exposure Standards and Biological Exposure Indices Nov 2017 edition.
3. Assigning a hazardous substance to a HSNO Approval (Aug 2013).
4. Transport of Dangerous goods on land NZS 5433:2012
5. HSW (Hazardous Substances) Regulations 2017

### Disclaimer

This document has been prepared by TCC (NZ) Ltd and serves as the suppliers Safety Data Sheet ('SDS'). It is based on information concerning the product which has been provided to TCC (NZ) Ltd or obtained from third party sources and is believed to represent the current state of knowledge as to the appropriate safety and handling precautions for the product at the time of issue. Further clarification regarding any aspect of the product should be obtained directly from the manufacturer. While TCC (NZ) have taken all due care to include accurate and up-to-date information in this SDS, it does not provide any warranty as to accuracy or completeness. As far as lawfully possible, TCC (NZ) Ltd accept no liability for any loss, injury or damage (including consequential loss) which may be suffered or incurred by any person as a consequence of their reliance on the information contained in this SDS

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Please contact Adria, if further information is required.

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