

## SAFETY DATA SHEET

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

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

Product: **Antagon**  
 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)**  
**0800 764 766 (National Poison Centre)**

Date of SDS Preparation: 17 October 2018

### Section 2. Hazards Identification

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

**EPA Approval No: HSR000494**

**Pictograms:**



Toxic/Irritant    Chronic    Ecotoxic

Signal Word: **Warning**

HSNO Classification	Hazard Code	Hazard Statement	GHS Category
6.1D (oral)	H302	Harmful if swallowed.	Acute Tox. 4
6.1D (inh)	H332	Harmful if inhaled.	Acute Tox. 4
6.3A	H315	Causes skin irritation.	Skin Irrit. 2
6.4A	H319	Causes serious eye irritation.	Eye Irrit. 2A
6.9B (oral)	H373	May cause damage to organs through prolonged or repeated exposure.	STOT RE 2
9.1A	H410	Very toxic to aquatic life with long lasting effects.	Aquatic Chronic 1
9.3C	H433	Harmful to terrestrial vertebrates.	-
9.4C	H443	Harmful to terrestrial invertebrates.	-

Prevention Code	Prevention Statement
P102	Keep out of reach of children.
P103	Read label before use.
P260	Do not breathe fume, mist or spray.
P264	Wash hands thoroughly after handling.
P270	Do not eat, drink or smoke when using this product.
P271	Use only outdoors or in a well-ventilated area.
P273	Avoid release to the environment.
P280	Wear protective clothing as detailed in Section 8.

Response code	Response Statement
P101	If medical advice is needed, have product container or label at hand.
P312	Call a POISON CENTER or doctor/physician if you feel unwell.
P330	Rinse mouth.
P362	Take off contaminated clothing and wash before re-use.
P391	Collect spillage.
P301 + P312	IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell.
P302 + P352	IF ON SKIN: Wash with plenty of soap and water.
P304 + P340	IF INHALED: Remove to fresh air and keep at rest in a position comfortable for breathing.
P305 + P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P332 + P313	If skin irritation occurs: Get medical advice/ attention.
P337 + P313	If eye irritation persists: Get medical advice/attention.

Storage Code	Storage Statement
None allocated	

Disposal Code	Disposal Statement
P501	Refer to Section 13.

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

Ingredients	Content (%w/w)	CAS NUMBER.
Dodine	40	2439-10-3
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	Take off contaminated clothing and wash before re-use. Wash affected areas with soap and water. If skin irritation occurs: Get medical advice/attention.
If Swallowed	Rinse mouth. If swallowed do NOT induce vomiting. Never give anything to an unconscious person. IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.
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:** Harmful if swallowed.

**Inhalation:** Harmful if inhaled.

**Skin:** Causes skin irritation.

**Eye:** Causes serious eye irritation.

**Chronic:** May cause damage to organs through repeated or prolonged exposure.

## Section 5. Fire Fighting Measures

<b>Hazard Type</b>	This product is not flammable or combustible.
<b>Hazards from products</b>	High temperature may liberate toxic gases. Carbon monoxide. Carbon dioxide. Nitrogen oxides.
<b>Suitable Extinguishing media</b>	Foam. Dry chemical. Carbon dioxide. Water spray.
<b>Recommended protective clothing &amp; Precautions for firefighters</b>	Do not enter fire area without proper protective equipment, including respiratory protection. Exercise caution when fighting any chemical fire. Avoid (reject) fire-fighting water to enter environment.
<b>HAZCHEM CODE</b>	<b>3Z</b>

## Section 6. Accidental Release Measures

### Personal precautions:

Use protective clothing as per Section 8. Respiratory protection equipment may be necessary. Avoid contact with skin, eyes and clothing. Remove contaminated clothes and shoes immediately. Wash contaminated clothing before reusing.

### 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. Place in waste containers. Dispose of waste safely, according to Local Council regulations.

## Section 7. Handling and Storage

### Precautions for Handling:

- Read label before use.
- Do not breathe fume, mist or spray.
- Wash hands thoroughly after handling.
- Do not eat, drink or smoke when using this product.
- Use only outdoors or in a well-ventilated area.
- Avoid release to the environment.
- Avoid exposure to eyes, skin and clothing.
- Wear appropriate protective clothing, refer to section 8).
- May cause hepatotoxicity from repeated oral exposure at high doses.

### Precautions for Storage:

- Store away from incompatible materials listed in Section 10.
- Store securely out of reach of children.
- Store locked up in a well-ventilated place.
- Keep container tightly closed.

## Section 8 Exposure Controls / Personal Protection

Product Name: Antagon  
Date of SDS: 17 October 2018

Prepared by: Technical Compliance Consultants (NZ) Ltd  
Tel: 64 9 475 5240 www.techcomp.co.nz

## 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 2017 9TH EDITION.

### Engineering Controls / Industrial Hygiene

Local exhaust and general ventilation must be adequate to meet exposure standards. Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure. Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure.

### Personal Protection Equipment



<b>Eyes</b>	Chemical goggles or face shield with safety glasses.
<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>	Where excessive vapour may result, wear approved mask.
<b>General</b>	Keep away from food, drink and animal feedstuffs. No eating, drinking or smoking during use. Wash hands and face before breaks and after work.

## Section 9 Physical and Chemical Properties

<b>Appearance</b>	Suspension Concentrate
<b>Colour</b>	White
<b>Odour</b>	Characteristic
<b>Odour Threshold</b>	Not available
<b>pH</b>	Slightly acidic (6.4)
<b>Melting/Boiling Point</b>	Not available
<b>Freezing Point</b>	Not available
<b>Flash Point</b>	Not available
<b>Flammability</b>	Not available
<b>Upper and Lower Explosive Limits</b>	Not available
<b>Vapour Pressure</b>	Not available
<b>Vapour Density</b>	Not available
<b>Density</b>	1.06 g/L
<b>Water Solubility</b>	Not available
<b>Log P Octanol / water at 20°C</b>	0.96
<b>Ignition Temperature</b>	430°C
<b>Decomposition Temperature</b>	Not available
<b>Viscosity</b>	800 cPs
<b>Particle Characteristics</b>	Not available
<b>Surface tension</b>	Not 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>	None known.
<b>Incompatible Materials</b>	Avoid contact with: Strong acids. Alkalis, finely divided metals.
<b>Hazardous Decomposition Products</b>	According to process conditions, hazardous decomposition products may be generated. Carbon monoxide. Carbon dioxide. Nitrogen oxides.

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

<b>Swallowed</b>	Harmful if swallowed. Acute oral LD50 > 2000 mg/kg
<b>Dermal</b>	Not applicable. LD50 > 6000 mg/kg
<b>Inhalation</b>	Harmful if inhaled.
<b>Eye</b>	Causes serious eye irritation.
<b>Skin</b>	Causes skin irritation.

**Chronic Effects:**

<b>Carcinogenicity</b>	Not applicable.
<b>Reproductive Toxicity</b>	Not applicable.
<b>Germ Cell Mutagenicity</b>	Not applicable.
<b>Aspiration</b>	Not applicable.
<b>STOT/SE</b>	Not applicable.
<b>STOT/RE</b>	Causes 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>
Dodine (2439-10-3)	851mg/kg (rat))	-	0.44mg/L (dust/mist)

**Section 12. Ecotoxicological Information**

<b>Ecological effects information</b>	9.1A = Very toxic to aquatic life with long lasting effects. 9.3C = Harmful to terrestrial vertebrates. 9.4C = Harmful to terrestrial invertebrates.
<b>Persistence and degradability</b>	No data available
<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>	Harlequin fish = LC50 = 0.6 mg/L Oncorhynchus mykiss = LC50 = 0.57mg/l(acute) Fathead minnow = NOEC = 0.099mg/l (37 days) (chronic)
<b>Toxicity for daphnia:</b>	LC50 (48 h) 42–106 mg/L
<b>Toxicity to algae:</b>	EC50 (96 h) <0.1 mg/L
<b>Precautions:</b>	Do not allow to enter waterways.

## 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.

## Section 14 Transport Information

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>	II
<b>Proper Shipping Name</b>	<b>ENVIRONMENTALLY HAZARDOUS SUBSTANCE (Dodine (ISO)40% solution)</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: HSR000494

HSNO Classification: 6.1D(oral,inh), 6.3A, 6.4A, 6.9B, 9.1A, 9.3C, 9.4C

<b>HSW (HS) Regulations 2017</b>	<b>Trigger Quantity</b>
Certified Handlers	Not required
Location Certificate	Not required
Signage Trigger Quantities (Schedule 3)	100L (9.1A)
Emergency Response Plan (Schedule 5)	100L (9.1A)
Secondary Containment (Schedule 5)	100L (9.1A)
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 - HSR000494
<b>HSNO Additional Controls (Restrictions of use)</b>	
77A	The substance must not be applied onto or into water.
<b>Hazardous Property Controls Notice 2017</b>	
HPC Notice Part 4 Clause 47	Equipment for class 9 substances must be appropriate

HPC Notice Part 4 Clause 48	Records of application of class 9 pesticides and plant growth regulators
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
HPC Notice Part 4 Subpart C	Qualifications required for application of class 9 pesticides.
<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	P8584

## 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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