

SAFETY DATA SHEET

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

Section 1. Identification of the material and the supplier

Product:	Duality
Product Use:	Herbicide
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:	29 October 2018

Section 2. Hazards Identification

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

EPA Approval No: HSR000762

Pictograms



Irritant Ecotoxic

Signal Word: **Warning**

HSNO Classification	Hazard Code	Hazard Statement	GHS Category
6.4A	H319	Causes serious eye irritation.	Eye Irrit. 2A
9.1C	H412	Harmful to aquatic life with long lasting effects.	Aquatic Chronic 3
9.2A	H421	Very toxic to the soil environment.	-
9.3C	H433	Harmful to terrestrial vertebrates.	-

Prevention Code	Prevention Statement
P103	Read label before use.
P264	Wash hands thoroughly after handling.
P273	Avoid release to the environment.
P280	Wear protective clothing as detailed in Section 8.

Response code	Response Statement
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.
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/v)	CAS NUMBER.
Picloram	15.00	1918-02-1
Clopyralid	22.5	1702-17-6
Other ingredients determined not to be 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 After contact with skin, wash immediately with soap and water. Remove contaminated clothing. If skin irritation occurs: get medical advice/attention.

If Swallowed If swallowed do NOT induce vomiting. 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. Call a POISON CENTRE or a doctor immediately.

Most important symptoms and effects, both acute and delayed

Symptoms:

Ingestion: Not applicable.

Inhalation: Not applicable.

Skin: Not applicable.

Eye: Causes serious eye irritation.

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

General: First Aid responders should pay attention to self-protection and use the recommended protective clothing (chemical resistant gloves, splash protection). If potential for exposure exists refer to Section 8 for specific personal protective equipment.

Section 5. Fire Fighting Measures

Hazard Type	This product is non-flammable.
Hazards from products	As the product contains combustible organic components, fire will produce dense black smoke containing hazardous products of combustion.
Suitable Extinguishing media	To extinguish combustible residues of this product use water fog, carbon dioxide, dry chemical or foam.
Recommended protective clothing & Precautions for firefighters	Wear SCBA and chemical-protective clothing.
HAZCHEM CODE	2X

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

Use protective clothing as detailed in Section 8. Avoid contact with skin, eyes and clothing. Remove contaminated clothes and shoes immediately. Rewash contaminated clothing before reuse. No smoking in the area. Evacuate all unnecessary personnel.

Environmental precautions:

Do not discharge into drains/surface waters/groundwater. Do not discharge into the subsoil/soil. Notify authorities if product enters sewers or public waters.

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.

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

- Read label before use.
- Wash hands thoroughly after handling.
- Avoid release to the environment.
- Wear protective clothing as detailed in Section 8.
- Avoid contact with skin and eyes.
- Ventilation required.
- Wash body thoroughly after handling.

Precautions for Storage:

- Store in a cool dry place away from children.
- Store in original container and keep tightly closed when not in use.
- Keep away from heat and protect from sunlight.
- Protect against freezing.
- Do not store near food or foodstuffs,
- Store away from incompatible materials listed in Section 10.

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

Substance	TWA		STEL	
	ppm	mg/m ³	ppm	mg/m ³
Picloram [1918-02-1]	-	10	-	-

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

Ensure adequate ventilation.

Personal Protection Equipment



Eyes	Wear safety goggles with side-shields.
Hands	Suitable chemical resistant safety gloves (e.g. nitrile rubber (.4mm)).
Skin	Body protection (chemical protection suit, boots) must be chosen depending on activity and possible exposure.
Respiratory	Wear respiratory protection if ventilation is inadequate. Particle filter with medium efficiency for solid and liquid particles.
General	Keep away from food, drink and animal feedstuffs. No eating, drinking or smoking during use and wash hands and face before breaks and after work.

Section 9 Physical and Chemical Properties

Appearance	Liquid
Colour	Brown
Odour	Characteristic
Odour Threshold	Not available
pH	8.0 – 10.0
Melting Point/Boiling Point	>100°C
Freezing Point	Not available
Flash Point	Not available
Flammability	Not available
Upper and Lower Explosive Limits	Not available
Vapour Pressure	Not available
Vapour Density	Not available
Density	1120 – 1160 g/L
Water Solubility	Suspends in water
Partition Coefficient:	Not available
Ignition Temperature	Not available
Decomposition Temperature	Not available
Viscosity	Not available
Particle Characteristics	Not available

Section 10. Stability and Reactivity

Stability of Substance	Stable under normal storage and handling conditions.
Possibility of hazardous reactions	None under normal storage and use conditions.
Conditions to Avoid	None known.
Incompatible Materials	Strong acids, bases and oxidisers.
Hazardous Decomposition Products	Oxides of nitrogen, chlorine and carbon (including carbon monoxide and carbon dioxide).

Section 11 Toxicological Information**Acute Effects:**

Swallowed	Not applicable. LD50: > 5000 mg/kg
Dermal	Not applicable. LD50 >2000 mg/kg
Inhalation	Not applicable. > 1 g/L (4 hrs)
Eye	Causes serious eye irritation.
Skin	Not applicable.

Chronic Effects:

Carcinogenicity	Not applicable.
Reproductive Toxicity	Not applicable.
Germ Cell Mutagenicity	Not applicable.
Aspiration	Not applicable.
STOT/SE	Not applicable.
STOT/RE	Not applicable.

Section 12. Ecotoxicological Information

Ecological effects information	9.1C = Harmful to aquatic life with long lasting effects. 9.2A = Very toxic to the soil environment. 9.3C = Harmful to terrestrial vertebrates.
Persistence and degradability	No data available
Bioaccumulation	No data available
Mobility in Soil	No data available
Other adverse effects	No data available
Acute fish toxicity:	Picloram: LC50 (96 h) for rainbow trout 5.5, bluegill sunfish 14.5 mg/l Clopyralid: LC50 (96 h) for rainbow trout 103.5, bluegill sunfish 125.4 mg/l
Toxicity for daphnia:	Picloram: LC50 34.4 mg/l Clopyralid: EC50 (48 h) 225 mg/l. EC50 (21 d) immobilisation 69, reproduction 80 mg/l; NOEC 17 mg/l
Toxicity to algae:	Picloram: EC50 for Selenastrum 36.9 mg/l Clopyralid: EC50 (96 h) for Selenastrum capricornutum, cell count 6.9, cell volume 7.3 mg/l
Precautions:	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 NOT classified as a Dangerous Good for transport in NZ; NZS 5433:2012

Section 15 Regulatory Information

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

EPA Approval Code: HSR000762

HSNO Classification: 6.4A, 9.1C, 9.2A, 9.3C

HSW (HS) Regulations 2017	Trigger Quantity
Certified Handlers	Not required
Location Certificate	Not required
Signage Trigger Quantities (Schedule 3)	1000L (9.1C)
Emergency Response Plan (Schedule 5)	1000L (9.1C)
Secondary Containment (Schedule 5)	1000L (9.1C)
Tracking (Schedule 26)	Not required
For all further controls	Refer to EPA www.epa.govt.nz for controls document - HSR000762
HSNO Additional Controls (Restrictions of use)	
77A	a) The substance must not be applied onto or into water.
Hazardous Property Controls Notice 2017	
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
Hoc 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 for application of class 9 pesticides.
ACVM Act and Regulations	
ACVM Approval No See www.foodsafety.govt.nz for registration controls	P7670

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 ₅₀	Median effective concentration.
EEL	Environmental Exposure Limit.
EPA	Environmental Protection Authority
HSNO	Hazardous Substances and New Organisms.
HSW	Health and Safety at Work.
LC ₅₀	Lethal concentration that will kill 50% of the test organisms inhaling or ingesting it.
LD ₅₀	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

The information herein is given in good faith, but no warranty, express or implied is made.

Please contact Adria, if further information is required.

Issue Date: 29 October 2018 Review Date: 29 October 2023