SAFETY DATA SHEET

Section 1. Identification of the material and the supplier

Product:	**CUTLASS 500 HERBICIDE**
Chemical name of active	Dicamba is a benzoic acid derivative
Product Use:	Herbicide
Restriction of Use:	Refer to Section 15
New Zealand Supplier:	ADAMA New Zealand Ltd
Address:	Level 1/93 Bolt Road Tahunanui, 7011, Nelson
Telephone:	+64 3 543 8275
Fax Number:	+64 3 543 8274
Emergency Telephone:	**0800 764 766 (National Poison Centre)**
Date of SDS Preparation:	3 September 2018

Section 2. Hazards Identification

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

EPA Approval No: HSR000442

Pictograms

Toxic Chronic Ecotoxic

Signal Word: **DANGER**

HSNO Classification	Hazard Code	Hazard Statement	GHS Category
6.1E (oral)	H303	May be harmful if swallowed.	Acute Tox. 5
6.1E (dermal)	H313	May be harmful in contact with skin.	Acute Tox. 5
6.3A	H315	Causes skin irritation.	Skin Irrit. 2
6.4A	H319	Causes serious eye irritation.	Eye Irrit. 2A
6.9B	H373	May cause damage to organs through prolonged or repeated exposure.	STOT RE 2
9.1A	H400	Very toxic to aquatic life.	Aquatic Acute 1
9.2A	H421	Very toxic to the soil environment.	
9.3B	H432	Toxic to terrestrial vertebrates.	
9.4B	H442	Toxic 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, vapours and spray.
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**
P101	If medical advice is needed, have product container or label at hand.
P314	Get medical advice/attention if you feel unwell.
P362	Take off contaminated clothing and wash before re-use.
P391	Collect spillage.
P302 + P352	IF ON SKIN: Wash with plenty of soap and water.
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**
P405	Store locked up.

Disposal Code	**Disposal Statement**
P501	Wherever possible completely use material by using according to label instructions. Dispose of unwanted product and wastes from spillages as hazardous substances in accordance with local and national regulations using a licensed waste disposal company. Triple rinse containers and add rinsate to spray tank before puncturing and offering for recycling or landfill. Do not allow product to enter waterways. Do not burn product or container.

Section 3. Composition / Information on Ingredients

Ingredients	**Value**	**CAS NUMBER.**
Dicamba *	250g/l	55219-65-3
Other ingredients not contributing to the overall classification of the substance or non-hazardous	10-30	NA
Water	To bal	7732-18-5

* Dicamba is present as the dimethylamine salt.

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 off immediately with soap and plenty of water. If skin irritation occurs: Get medical advice/attention.

If Swallowed — Wash out mouth with plenty of water. Get medical attention. Never give anything by mouth to an unconscious person. Call a POISON CENTER or doctor/physician if you feel unwell.

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. Get medical advice if breathing becomes difficult.

Most important symptoms and effects, both acute and delayed
Symptoms:

Ingestion: May be harmful if swallowed.
Skin: May be harmful if in contact with skin. Causes skin irritation.
Inhalation: Not applicable.
Eyes: Causes severe eye irritation.
Chronic: May cause damage to organs through prolonged or repeated exposure.

Notes to physician: There is no specific antidote. Treat symptomatically and give supportive therapy. If ingested perform gastric lavage and administer activated charcoal.

Section 5. Fire Fighting Measures

Hazard Type	Non Flammable.
Hazardous thermal (de)composition products	There is no risk of explosion from this product under normal circumstances if it is involved in a fire. This product is likely to decompose only after heating to dryness, followed by further strong heating. Fire decomposition products from this product may be toxic if inhaled. Take appropriate protective measures.
Suitable Extinguishing media	Use extinguishing media suited to burning materials.
Precautions for firefighters and special protective clothing	Wear proper protective equipment. Self-contained breathing apparatus.
HAZCHEM CODE	**3Z**

Section 6. Accidental Release Measures

Wear full protective clothing as detailed in Section 8. Evacuate area from unnecessary personnel.

Environmental precautions
Do not allow into any sewer, on the ground or into any body of water. Prevent product from entering drains. Local authorities should be advised if significant spillages cannot be contained.

Methods and material for containment and cleaning up
Absorb remainder in sand or other inert material. Avoid using sawdust or other combustible materials. Dispose of in an authorized waste collecting point.

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, mist, vapours and spray.
- Wash hands thoroughly after handling.
- Do not eat, drink or smoke when using this product.
- Avoid release to the environment.
- When mixing or applying wear appropriate protective clothing including cotton overalls buttoned to the neck and wrist, impervious, elbow-length gloves, and eye protection.
- Remove protective clothing and wash hands, arms and face with soap and water before meals and after work.
- Use personal protective equipment as required.

Precautions for Storage:
- Store away from incompatible materials listed in Section 10.
- Keep away from children.

- Store in original, unopened container in a cool, dry place, out of direct sunlight and away from stock feed or foodstuffs.

Section 8 Exposure Controls / Personal Protection

WORKPLACE EXPOSURE STANDARDS (provided for guidance only)

Substance	TWA ppm	TWA mg/m3	STEL ppm	STEL mg/m3
1-Methyl-2-pyrrolidone (skin) [872-50-4]	25	103	75	309

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

No special ventilation requirements are normally necessary for this product.

Personal Protection Equipment

Eyes	Safety goggles or Chemical goggles.
Hands and Skin	Wear chemical resistant gloves, suitable protective closing and boots.
Respiratory	Respirator is recommended.
General	When handling do not eat, drink or smoke. Wash hands thoroughly after handling. Wash clothing separately before re-use.

Section 9 Physical and Chemical Properties

Appearance	Clear, almost colourless liquid
Odour	Mild, Characteristic
Odour Threshold	Not applicable
pH	Not applicable
Boiling Point	Approximately100°C at 100kPa
Melting Point	Approximately 0 °C
Flash Point	Not applicable
Flammability	Not applicable
Upper and Lower Exposure Limits	Not applicable
Vapour Pressure	2.37 kPa at 20◦C (water vapour pressure)
Specific Gravity	Not applicable
Bulk Density	Not applicable
Relative Density	Not applicable
Solubility in water	Completely soluble in water
Auto-ignition Temperature	Not applicable
Octanol/water partition coefficient	Not applicable

Section 10. Stability and Reactivity

Stability of Substance	This product is unlikely to react or decompose under normal conditions.

Conditions to Avoid	Protect from (sun) light, open flame and sources of heat. Decomposes upon heating.
Incompatible Materials	This product should be kept in a cool place, preferable below 30 °C. Avoid strong acids, strong bases and strong oxidizing agents.
Hazardous Decomposition Products	This product is likely to decompose only after heating to dryness, followed by further strong heating. Carbon dioxide, and if combustion is incomplete, carbon monoxide and smoke. Hydrogen chloride gas, other compounds of chlorine.

Section 11 Toxicological Information

Acute Effects:

Swallowed	May be harmful if swallowed.
Dermal	May be harmful if in contact with skin.
Inhalation	Not applicable
Eye	Causes severe eye irritation.
Skin	Causes skin irritation.

Chronic Effects:

Carcinogenicity	Not applicable.
Reproductive Toxicity	No applicable.
Germ Cell Mutagenicity	Not applicable.
Aspiration	Not applicable.
STOT/SE	Not applicable.
STOT/RE	May cause damage to organs through prolonged or repeated exposure.

Preparation	**Dicamba**
Acute toxicity -	Oral: LD50 (rats) 757 to 1707 mg/kg
	LD50 (mice) 1190 mg/kg
	LD50 (rabbits) >2,000 mg/kg
	LD50 (guinea pigs) 566 to 3,000 mg/kg
Acute toxicity - Dermal:	LD50 (rabbits) >2000 mg/kg
Acute toxicity – Inhalation:	LC50 (rat) > 200 mg/L
Skin irritation:	Very irritating
Eye irritation:	Very irritating
Sensitization:	Skin sensitizer

Common name:	**Dicamba**
Chronic toxicity:	No toxic effects observed in rats given 25mg/kg/day for 2 years
Carcinogenicity:	No signs of cancer observed in rats given 25mg/kg/day for 2 years

Section 12. Ecotoxicological Information

HSNO Classes:	9.1A =	Very toxic to aquatic life.
	9.2A =	Very toxic to the soil environment.
	9.3B =	Toxic to terrestrial vertebrates.
	9.4B =	Toxic to terrestrial invertebrates.

Persistence and degradability	No data available
Bioaccumulation	No data available
Mobility in Soil	No data available

Other adverse effects	No data available

Ecotoxicity:
Fish Dicamba has a low toxicity to fish

LC50 (96 hours)	bluegill sunfish & rainbow trout	= 135 mg/L
LC50 (48 hours)	rainbow trout	= 35 mg/L
	buegill	= 40 mg/L
	carp	= 465 mg/L

Birds Dicamba is practically nontoxic to birds
LC50 in both mallard and bobwhite quail = >10,000ppm

Common name: Dicamba
Mobility: Soil - Moderately persistent
Persistence/degradability: The product is moderately persistent. Half-life time (t½): Typically 1 to 4 weeks

Breakdown in soil and ground water: Under conditions suitable for rapid metabolism, the half-life is less than 2 weeks. Metabolism by soil microorganisms is the major pathway of loss under most soil conditions. The rate of biodegradation increases with temperature and increasing soil moisture, and tends to be faster when soil is slightly acidic. When soil moisture increases above 50%, then rate of biodegradation declines. Dicamba slowly breaks down in sunlight. Volatilisation from soil surface is probably not significant, but some Volatilisation may occur from plant surface. It is stable to water and other chemicals in the soil. Dicamba does not bind to soil particles and is highly soluble in water. It is therefore highly mobile in the soil and may contaminate groundwater. In humid areas, Dicamba will be leached from the soil in 3-12 weeks.
Breakdown in water: In water, microbial degradation is the main route of Dicamba disappearance. Photolysis may also occur. Aquatic hydrolysis, volatilization, adsorption to sediments, and bio-concentration are not expected to be significant.
Breakdown in vegetation: Dicamba is rapidly taken up by the leaves and roots of plants, and it is readily translocated to other plant parts. In some plant species, Dicamba accumulates in the tips of mature leaves. Desirable broadleaf plants such as fruit trees and tomatoes may be harmful during growth and development stages. Residues of Dicamba on treated plants can disappear through exudation from the roots into the surrounding soil, metabolism with the plant, or by loss from leaf surfaces.
Practically non toxic: birds. Low toxic: Fish. Non toxic: bees

Section 13. Disposal Considerations

Disposal Method: Dispose of this product only by using according to the label or at an approved landfill. Container Disposal: Triple rinse container and add rinsate to spray tank. Burn in an appropriate incinerator, if circumstances such as wind direction permit. Otherwise crush or puncture and bury in a suitable landfill, or if appropriate, recycle.

Precautions: Do not allow product to enter waterways.

Disposal methods to avoid: Do not allow product to enter waterways.

Section 14 Transport Information

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

Road and Rail Transport

UN No: 3082
Class-primary 9
Packing Group III
Proper Shipping Name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Dicamba)

Air Transport
UN No: 3082
Class-primary 9
Packing Group III
Proper Shipping Name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Dicamba)

Marine Transport
UN No: 3082
Class-primary 9
Packing Group III
Proper Shipping Name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Dicamba)
Marine Pollutant: Yes

Special Provisions:

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

EPA Approval Code: HSR000442
HSNO Classification: 6.1D(oral, dermal), 6.3A, 6.4A, 6.9B, 9.1A, 9.2A, 9.3C, 9.4B

HSW (HS) Regulations 2017 and EPA Notices	**Trigger Quantity**
Certified Handlers	Not required
Location Certificate	Not required
Tracking Trigger Quantities	Not required
Spray Records	3 Litres or more within a 24 hour period
Signage Trigger Quantities	100L(9.1A)
Emergency Response Plan	100L(9.1A)
Secondary Containment	100L(9.1A)
HSNO Additional Controls (Restrictions of use)	
77A	This 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
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.
ACVM Act and Regulations	
Registered pursuant to the ACVM Act 1997, See www.foodsafety.govt.nz for registration conditions	No. P7416
For all further controls	Refer to EPA website (www.epa.govt.nz) for controls document - HSR000442

Section 16 Other Information

Glossary

EC50	Median effective concentration.
EEL	Environmental Exposure Limit.
EPA	Environmental Protection Authority
HSNO	Hazardous Substances and New Organisms.
LC50	Lethal concentration that will kill 50% of the test organisms inhaling or ingesting it.
LD50	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 the Adama, if further information is required.

Issue Date: 3 September 2018 Review Date: 3 September 2023