SAFETY DATA SHEET

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

Section 1. Identification of the material and the supplier

Product:	**Alliacine 40EC**
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)3** **0800 764 766 (National Poison Centre)**
Date of SDS Preparation:	6 June 2023

Section 2. Hazards Identification

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

EPA Approval No: HSR000651

Pictograms

Irritant Chronic Ecotoxic

Signal Word: **DANGER**

Hazard Code	Hazard Statement	GHS Category
H227	Combustible liquid.	Flam. Liq. 4
H319	Causes serious eye irritation.	Eye Irrit. 2
H336	May cause drowsiness or dizziness.	STOT SE 3 Narcosis
H373	May cause damage to organs through prolonged or repeated exposure.	STOT RE 2
H304	May be fatal if swallowed and enters airways.	Asp. 1
H411	Toxic to aquatic life with long lasting effects.	Aquatic Chronic 2
	Hazardous to soil organisms.	NA

Prevention Code	Prevention Statement
P102	Keep out of reach of children.
P103	Read label before use.
P210	Keep away from heat, sparks, open flames or hot surfaces. No smoking.
P260	Do not breathe vapours/spray.
P264	Wash hands thoroughly after handling.
P271	Use only outdoors or in a well-ventilated area.
P280	Wear protective clothing as detailed in Section 8.
Label Notice	Do not apply directly into or onto water.
Label Notice	Take all reasonable steps to ensure that the substance does not cause any significant adverse effects to the environment beyond the application area.

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.
P391	Collect spillage.
P301+P310	IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.
P304 + P340	IF INHALED: Remove victim 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.
P331	Do NOT induce vomiting.
P337+P313	If eye irritation persists: Get medical advice/attention.
P370 + P378	In case of fire: Use water, foam, carbon dioxide or dry chemical for extinction.

Storage Code	Storage Statement
P403 + P233 + P235	Store in a well-ventilated place. Keep container tightly closed. Keep cool.
P405	Store locked up.

Disposal Code	Disposal Statement
P501	Dispose of contents/container in accordance with local regulations.

Section 3. Composition / Information on Hazardous Ingredients

Ingredients	Content (%w/v)	CAS NUMBER.
Chlorpropham	393 – 423g/l	101-21-3
Hydrocarbons, C9, aromatics, <1% naphthalene	> 50%	64742-94-5
Benzenesulfonic acid, mono-C11-13-branched alkyl derivs., calcium salts	< 5%	68953-96-8

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	Rinse mouth. If swallowed do NOT induce vomiting. Never give anything to an unconscious person. Seek medical attention immediately if required.
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: May cause drowsiness or dizziness
Ingestion: Risk of lung oedema.
Inhalation: Not applicable.
Skin: Not applicable.
Eye: Eye irritation.
Chronic: 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

Hazard Type	This product is combustible.
Hazards from combustion products	High temperature may liberate toxic gases. Halogens. Carbon monoxide. Carbon dioxide. Hydrogen chloride. Nitrogen oxides.
Suitable Extinguishing media	Water. Foam. Carbon dioxide. Dry chemical. Use extinguishing media appropriate for surrounding fire.
Recommended protective clothing & Precautions for firefighters	Wear SCBA and chemical-protective clothing.
HAZCHEM CODE	**3WE**

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.

Section 7. Handling and Storage

Precautions for Handling:

- Read label before use.
- Keep away from heat, sparks, open flames or hot surfaces. No smoking.
- Keep container tightly closed.
- Ground/bond container and receiving equipment.
- Use explosion-proof electrical/ventilating/lighting.
- Use only non-sparking tools.
- Ventilation required.
- Take precautionary measures against static discharge.
- Do not breathe fumes, vapours or spray.
- Wash hands thoroughly after handling.
- Avoid release to the environment.
- Wear protective clothing as detailed in Section 8.

Precautions for Storage:

- Store away from incompatible materials listed in Section 10.
- Keep away from children.
- Store in a well-ventilated place. Keep cool.
- Provide local exhaust or general room ventilation to minimise vapour concentrations.

Section 8 Exposure Controls / Personal Protection

WORKPLACE EXPOSURE STANDARDS (provided for guidance only)

Substance	TWA ppm	TWA mg/m^3	STEL ppm	STEL mg/m^3

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
Ensure there is sufficient ventilation of the area.

Personal Protection Equipment

Eyes	Safety goggles with side-shields.
Hands	Wear suitable gloves resistant to chemical penetration e.g. nitrile rubber gloves with a minimum thickness of 0.4 mm.
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 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

Appearance	Liquid
Colour	Yellow-Brown
Odour	Aromatic
Odour Threshold	Not available
pH	6.25 (1% solution)
Boiling Point	Not available
Melting Point	Not available
Freezing Point	Not available
Flash Point	63^0C
Flammability	Not available
Upper and Lower Explosive Limits	Not available
Vapour Pressure	Not available
Vapour Density	Not available

Density	997.4 kg/m³
Water Solubility	Not available
Partition Coefficient:	Not available
Ignition Temperature	470^0C
Decomposition Temperature	Not available
Viscosity	3.31 mm²/s (20°C - OECD 114)
Particle Characteristics	Not available
Surface tension	30.8 (25^0C)

Section 10. Stability and Reactivity

Stability of Substance	This product is stable under normal conditions.
Possibility of hazardous reactions	May release flammable gases.
Conditions to Avoid	None known.
Incompatible Materials	None known.
Hazardous Decomposition Products	According to process conditions, hazardous decomposition products may be generated. Thermal decomposition generates: Carbon dioxide. Carbon monoxide. Halogens. Nitrogen oxides.

Section 11 Toxicological Information

Acute Effects:

Oral	Not applicable.
Dermal	Not applicable.
Inhalation	Not applicable.
Eye	Causes serious eye irritation.
Skin	Causes mild skin irritation.

Chronic Effects:

Carcinogenicity	Suspected of causing cancer.
Reproductive Toxicity	Not applicable.
Germ Cell Mutagenicity	Not applicable.
Aspiration	May be fatal if swallowed and enters airways.
STOT/SE	May cause drowsiness or dizziness.
STOT/RE	May cause damage to organs through prolonged or repeated exposure.

Acute Toxicity -

Chemical Name	LD50 (Oral)	LD50 (Dermal)	LC50 (inhalation)
Alliacine 40EC	>2000mg/kg (Rats)	>4000mg/kg	
Chlorpropham	4200mg/kg (Rats)	>2000mg/kg	1.98 mg/l/4h

Section 12. Ecotoxicological Information

Ecological effects information	Toxic to aquatic life with long lasting effects.
Persistence and degradability	Hydrocarbons – inherently biodegradable.
Bioaccumulation	Low (Chlorpropham)
Mobility in Soil	No data available
Other adverse effects	No data available
Acute fish toxicity:	LC50 = 9.63 mg/l
Toxicity for daphnia:	EC50 = 8.84 mg/l (48h Daphnia magna)
Toxicity to algae:	ERC50 = 4.61 mg/l
Precautions:	Do not allow to enter waterways.

Section 13. Disposal Considerations

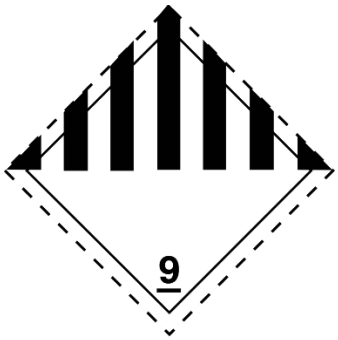
Disposal Method:
Triple rinse container and add residue to spray tank. Return empty container to an AgRecovery collection point for disposal.

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



Road, Rail, Sea and Air Transport

UN No	3082
Class - Primary	9
Packing Group	III
Proper Shipping Name	**ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S (Chlorpropham)**
Marine Pollutant	Yes
Special Provisions-Limited Quantities	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: HSR000651

HSW (HS) Regulations 2017	Trigger Quantity
Certified Handlers	Not required
Location Certificate	500L(>5L), 1500L(<5L), 250L open
Signage Trigger Quantities (Schedule 3)	1000L
Emergency Response Plan (Schedule 5)	1000L
Secondary Containment (Schedule 5)	1000L
Tracking (Schedule 26)	Not required

For all further controls	Refer to EPA www.epa.govt.nz for controls document - HSR000651
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	
ACVM Approval No See www.foodsafety.govt.nz for registration controls	P005579

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

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Please contact Adria, if further information is required.

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