



SAFETY DATA SHEET

Section 1. Identification of the material and the supplier

Product: **CYCLONE (previously ALANEX) 480 EC**
Chemical name of active: 2-Chloro-2',6'-diethyl-N-(methoxymethyl) acetanilide
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: 10 July 2018

Section 2. Hazards Identification

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

EPA Approval No: HSR000397

Pictograms



Flammable



Toxic/Irritant



Chronic



Ecotoxic

Signal Word: **DANGER**

HSNO Classification	Hazard Code	Hazard Statement	GHS Category
3.1C	H226	Flammable liquid and vapour.	Flam. Liq. 3
6.1D (oral)	H302	Harmful if swallowed.	Acute Tox. 4
6.1D (inh)	H332	Harmful if inhaled.	Acute Tox. 4
6.3B	H316	Causes mild skin irritation.	Skin Irrit. 3
6.4A	H319	Causes serious eye irritation.	Eye Irrit. 2A
6.5B	H317	May cause an allergic skin reaction.	Skin Sens. 1
6.7B	H351	Suspected of causing cancer.	Carc. 2
6.9A	H372	Causes damage to organs through prolonged or repeated exposure.	STOT RE 1
9.1A	H400	Very toxic to aquatic life.	Aquatic Acute 1
9.2A	H421	Very toxic to the soil environment.	
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.
P202	Do not handle until all safety precautions have been read and understood.
P210	Keep away from heat, sparks, open flames or hot surfaces. No smoking.
P233	Keep container tightly closed.
P240	Ground/bond container and receiving equipment.
P241	Use explosion-proof electrical/ventilating/lighting.
P242	Use only non-sparking tools.
P243	Take precautionary measures against static discharge.
P260	Do not breathe fumes, vapours 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.
P272	Contaminated work clothing should not be allowed out of the workplace.
P273	Avoid release to the environment.
P280	Wear protective clothing as 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.
P312	Call a POISON CENTER or doctor/physician if you feel unwell.
P330	Rinse mouth.
P363	Wash contaminated clothing before reuse.
P391	Collect spillage.
P301 + P312	IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell.
P303 + P361+P353	IF ON SKIN (or Hair) Take off/Remove immediately all contaminated clothing. Rinse skin with water/shower.
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.
P308 + P313	IF exposed or concerned: Get medical advice/ attention.
P333 + P313	If skin irritation or rash occurs: Get medical advice/attention.
P337 + P313	If eye irritation persists: Get medical advice/attention.
P370 + P378	In case of fire: Use dry chemical, water spray, foam or carbon dioxide for extinction.

Storage Code	Storage Statement
P405	Store locked up.
P403 + P235	Store in a well-ventilated place. Keep cool.
	Store locked up in the original, unopened container in a cool, dry, well-ventilated place, out of direct sunlight and away from stockfeed or foodstuffs. In case of fire use dry chemical, water spray, foam or carbon dioxide for extinction. As a Class 9 Substance with Ecotoxicity Classifications storage of CYCLONE must be carried out in such a manner as to prevent contamination of waterways. It is recommended that The New Zealand Standard for the Management of Agrichemicals (NZS8409) is followed as a means of meeting the secondary containment provisions of the HSNO Emergency Management Regulations. See Safety Data Sheet for further information.

Disposal Code	Disposal Statement
P501	Refer to Section 13

Section 3. Composition / Information on Ingredients

Ingredients	Wt %	CAS NUMBER.
Alachlor (ISO)	41-45	15972-60-8
Chlorobenzene	39-43	108-90-7
Other ingredients not contributing to the overall classification of the substance or non hazardous	To balance	NA

Section 4. First Aid Measures

Routes of Exposure:

If in Eyes	Rinse cautiously with water for 15 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 or rash occurs: Get medical advice/attention.
If Swallowed	Wash out mouth with plenty of water. 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:	Harmful if swallowed.
Skin:	Causes mild skin irritation. May cause an allergic skin reaction
Inhalation:	Harmful if inhaled.
Eyes:	Causes serious eye irritation.
Chronic:	Suspected of causing cancer. May cause damage to organs through prolonged or repeated exposure.

Notes to physician: There is no specific antidote. Treat symptomatically and give supportive therapy.

Section 5. Fire Fighting Measures

Hazard Type	Flammable Liquid
Hazardous thermal (de)composition products	Chloride compounds and nitrogen oxides.
Suitable Extinguishing media	Dry chemical, water spray, foam, carbon dioxide.
Precautions for firefighters and special protective clothing	Self-contained breathing apparatus and total protection required in enclosed areas.
HAZCHEM CODE	3Y

Section 6. Accidental Release Measures

Wear full protective clothing as detailed in Section 8. Evacuate area from unnecessary personnel. Keep away from: open flame, sparks and heat.

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. Dispose of container in a suitable landfill or take to an Agrecovery collection site.

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.
- 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.
- Take precautionary measures against static discharge.
- Do not breathe fumes, vapours 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.
- Contaminated work clothing should not be allowed out of the workplace.
- Avoid release to the environment.
- Wear protective clothing as detailed in Section 8.
- Use personal protective equipment as required.

Precautions for Storage:

- Store away from incompatible materials listed in Section 10.
- Keep away from children.
- Keep only in the original container. Keep in a cool, dry, well ventilated place away from direct sunlight.
- Resin-lined metal drums are the suitable packing material.

Section 8 Exposure Controls / Personal Protection

WORKPLACE EXPOSURE STANDARDS (provided for guidance only)

Substance	TWA		STEL	
	ppm	mg/m3	ppm	mg/m3
Monochlorobenzene (Chlorobenzene) [108-90-7]	10	46		

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

Ensure adequate ventilation.

Personal Protection Equipment



Eyes	Safety goggles or face shield. Avoid wearing contact lenses.
Hands and Skin	Wear chemical resistant gloves, suitable protective clothing and chemical resistant boots.
Respiratory	Respiratory protection is not required if good ventilation is maintained.
General	Change work clothes daily. May irritate the eyes and skin. Avoid contact with eyes and skin. Do not intake dust or spray mist. If product gets on skin immediately wash area with soap and water. After use and before eating, drinking or smoking, wash hands, arms and face thoroughly with soap and water.

Section 9 Physical and Chemical Properties

Appearance	Violet Liquid
Odour	Aromatic (solvent)
Odour Threshold	Not applicable
pH	5-7 CIPAC, MT 75
Boiling Point	130°C (Chlorobenzene)
Melting Point	Not applicable
Flash Point	29°C (closed cup)
Flammability	Flammable
Upper and Lower Exposure Limits	1.3 – 11%
Explosive properties	Vapours (Naphta) – May form explosive mixture with air.
Vapour Pressure	2.9 mPa @ 25°C (Alachlor) (ISO)
Density	1.12 ± 0.01 g/ml @ 20°C
Bulk Density	Not applicable
Relative Density	Not applicable
Solubilities in water	242 ppm @ 25°C (Alachlor) (ISO)
Auto-ignition Temperature	>600°C (Chlorobenzene)
Octanol/water partition coefficient	log = 2.9 (Alachlor) (ISO)
Volatiles	Not applicable

Section 10. Stability and Reactivity

Stability of Substance	This product is stable under normal conditions.
Conditions to Avoid	Sources of ignition.
Incompatible Materials	Oxidizing agents, acids and alkali.
Hazardous Decomposition Products	Chloride compounds and nitrogen oxides.

Section 11 Toxicological Information

Acute Effects:

Swallowed	Harmful if swallowed. LD50 (rat)= 1,837 mg/kg
Dermal	Not triggered. LD50 (rabbit) > 2,000 mg/kg
Inhalation	Harmful if inhaled. LC50 (rat) > 5.05 mg/L (4 hours) (maximum attainable concentration).
Eye	Causes severe eye irritation.
Skin	Causes mild skin irritation. May cause an allergic skin reaction.

Chronic Effects:

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Tel: 64 9 475 5240 www.techcomp.co.nz

Carcinogenicity	Suspected of causing cancer.
Reproductive Toxicity	Not applicable.
Germ Cell Mutagenicity	Not applicable.
Aspiration	Not applicable.
STOT/SE	Not applicable.
STOT/RE	Causes damage to organs through prolonged or repeated exposure.

Common name: **Alachlor (ISO)**
Chronic toxicity: NOEL: mice 26 mg/kg/day; 0.5 mg/kg/day
Carcinogenicity: EPA : Group B2
EU : Carc. Category 3
IARC : Not classified
Mutagenicity: Not mutagenic
Reproduction toxicity: NOEL 30 mg/kg/day (3-generation)
Other information : Teratogenicity - NOEL (Maternal and Fetal): 60 mg/kg/day.

Section 12. Ecotoxicological Information

HSNO Classes: 9.1A = Very toxic to aquatic life.
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

The data below is for Alachlor(ISO)

Mobility: Soil – Low mobility – moderately mobile
Adsorbed on soils with high organic content.
Water
Low risk of underground water contamination.

Persistence/degradability: Soil

Half-life time (t_{1/2}): ~ 21 days
Degradation is primarily via: microorganisms.

Water

55% degraded in 28 days

Bioaccumulative potential: Low bioaccumulation potential (Kow log P = 3.09)

Ecotoxicity:

Fish

LC50 (96 hours) rainbow trout (oncorhynchus mykiss) = 2.8 mg/L
Bluegill sunfish (Lepomis macrochirus) = 1.8 mg/L
Dwarf gowrami = 1.73 mg/L

Daphnia magna

EC50 (24 hours) = 26 mg/L

Algae (seleastrum capricornutum)

EC50 (72 hours) = 0.012 mg/L

Birds

Bobwhite quail (colinus virginianus) LD50 = 1,536 mg/kg

Chicken

LD50 = 916 mg/kg

Mallard duck (anas platyrhynchos) and

Bobwhite quail (colinus virginianus): LC50 > 5,620 mg/kg (5 feeding days)

Bees

LD50 = 32 mg/bee

Very toxic to aquatic organisms. Low toxicity: birds,
Non toxic: Bees

Section 13. Disposal Considerations

Disposal Method: Container Disposal - Triple rinse empty 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. Dispose of container in a suitable landfill or take to an Agrecovery collection site.

Precautions or methods to avoid:

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

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: 1993
Class-primary 3
Packing Group III
Proper Shipping Name: FLAMMABLE LIQUID N.O.S. (chlorobenzene)
National transport regulations: Do not carry this product on a passenger service vehicle.

Air Transport

UN No: 1993
Class-primary 3
Packing Group III
Proper Shipping Name: FLAMMABLE LIQUID N.O.S. (chlorobenzene)

Marine Transport

UN No: 1993
Class-primary 3
Packing Group III
Proper Shipping Name: FLAMMABLE LIQUID N.O.S. (chlorobenzene)
Marine Pollutant: Yes

Special Provisions:

If the product's individual container is below 5L, 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.

Segregation:

Check the land transport Rule Dangerous Goods 1999, Rule 45001 for additional information. Sea transport may require additional segregation. Refer: NZS5433; Sea Segregation, or the International Maritime Dangerous Goods Code for details.

Section 15 Regulatory Information

EPA Approval Code: HSR000397

HSNO Classification: 3.1C, 6.1D(oral)(inh), 6.3B, 6.4A, 6.5B, 6.7B, 6.9A, 9.1A, 9.2A, 9.3C

HSW (HS) Regulations 2017 and EPA Notices		Trigger Quantity
Certified Handlers		Not Required
Location Certificate		500L(>5L), 1500L(<5L), 250L open
Tracking Trigger Quantities		Not required
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.nzfsa.govt.nz/acvm for registration conditions		No. P7246
For all further controls		Refer to EPA website (www.epa.govt.nz) for controls document - HSR000397

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

Product Name: Cyclone
Date of SDS: 10 July 2018

Issued by: Technical Compliance Consultants (NZ) Ltd
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The information herein is given in good faith, but no warranty, express or implied is made.
Please contact the Adama, if further information is required.

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