

SAFETY DATA SHEET

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

Section 1. Identification of the material and the supplier

Product: **Performa Extracta Clethodim 360**
Substance: Emulsifiable concentrate of Clethodim
Chemical name of active ing: IUPAC Name:
2-[(E)-N-[(E)-3-chloroprop-2-en-1-yl]-3-
ethylcarbamimidoyl]-5-(2-ethylsulfanylpropyl)-3-
hydroxycyclohex-2-en-1-one
Product Use: Agricultural Herbicide
Restriction of Use: Refer to Section 15

New Zealand Supplier: Wholesale Seeds Limited
Address: 5 Bryant Street, Ashburton, New Zealand

Telephone No: 03 307 9260

Emergency No: 0800 CHEMCALL (0800243 622)

Manufacturer: **Arable AG Limited**
5 Arther Smith Drive
Cracroft
Christchurch 8022

Telephone No: 021 24161 52

Telephone: 0800 326 536

Date of SDS Preparation: 13 August 2026

Section 2. Hazards Identification

This substance is hazardous according to the EPA Hazardous Substances (Classification) Notice 2020

EPA Approval No: HSR100646

Pictograms



Signal Word: **WARNING**

GHS Classification and Category	Hazard Code	Hazard Statement
Flammable Liquid Cat. 4	H227	Combustible liquid.
Aspiration Cat.1	H304	May be fatal if swallowed and enters airways.

Eye Irritation Cat. 2	H319	Causes serious eye irritation
Skin Irritation Category 2	H315	Causes skin irritation.
Specific target organ toxicity (repeated exposure) Cat. 2	H373	May cause damage to organs through prolonged or repeated exposure
Hazardous to the aquatic environment chronic Cat. 2	H411	Very toxic to aquatic life with long lasting effects.
Hazardous to soil organisms		
Hazardous to Terrestrial Vertebrates		

Prevention Code	Prevention Statement
P101	If medical advice is needed, have product container or label at hand.
P102	Keep out of reach of children.
P103	Read carefully and follow all instructions.
P260	Do not breathe fume, mist, vapours or spray.
P264	Wash face and hands thoroughly after handling.
P280	Wear protective gloves, protective clothing and eye protection.

Response Code	Response Statement
P391	Collect spillage.

Storage Code	Storage Statement
None allocated	Keep out of reach of children. Store in the original container, tightly closed, in a locked cool, dry and well-ventilated area away from feed or foodstuffs. Avoid storage at temperatures below 5°C and above 35°C. Storage must be in accordance with the current version of NZS 8409 Management of Agrichemicals. Stores containing 100 L or more are subject to signage, secondary containment and an emergency response plan.

Disposal Code	Disposal Statement
P501	Dispose of according to Local Regulations or Authorities

Section 3. Composition / Information on Hazardous Ingredients

Ingredients	CAS NUMBER.	Content (g/L, w/v)
Clethodim	99129-21-2	360
Aromatic Hydrocarbons	64742-94-5	580
Non hazardous	Proprietary	Balance

Section 4. First Aid Measures

Routes of Exposure:

If in Eyes	Rinse cautiously with water for several minutes. If eye irritation persists: Get medical advice.
If on Skin	Wash off skin immediately with soap and plenty of water for 15 to 20 minutes. If skin irritation occurs: Get medical advice/attention.
If Swallowed	Wash out mouth thoroughly with water. Do not induce vomiting unless told to do so by a poison control center or doctor. Make every effort to prevent vomit from entering the lungs by careful placement of the patient. 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. Apply artificial respiration if not breathing. Get medical advice if breathing becomes difficult.

Most important symptoms and effects, both acute and delayed

Symptoms: Harmful if swallowed.

Notes to Doctor: Poisoning symptoms in laboratory animals were non-specific. There is no specific antidote available. Treat symptomatically.

Section 5. Fire Fighting Measures

HAZCHEM CODE	22
Hazard Type	Combustible product at elevated temperature.
Suitable Extinguishing media	Carbon dioxide, Dry chemical, Foam, or Water spray (fog). Unsuitable: Water in a jet.
Hazardous thermal (de)composition products:	Oxides of sulphur, nitrogen and carbon.
Specific methods:	Vapours may be toxic. Keep up-wind. Do not allow washings to reach sewage or effluent systems.
Precautions for firefighters and special protective clothing	Wear protective clothing and self-contained breathing apparatus. Do not allow run-off from firefighting to enter drains or water courses. Cool closed containers exposed to fire with water spray.

Section 6. Accidental Release Measures

Wear personal protective equipment detailed in Section 8. Avoid dust formation. Ensure adequate ventilation. Evacuate personnel to safe areas. Avoid breathing vapours and mist.

Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.

Pick up and arrange disposal without creating dust. Sweep up and shovel. Keep in suitable, closed containers for disposal. Dispose of in compliance with local and/or national regulations or as per Section 13.

Section 7. Handling and Storage

Precautions for Handling:

- Read carefully and follow all instructions.
- Wash hands thoroughly after handling.
- Do not eat, drink or smoke when using this product.
- Avoid release to the environment.
- Avoid contact with eyes and skin.
- When preparing spray and using the prepared spray wear: cotton overalls buttoned to the neck and wrist (or equivalent clothing), a washable hat, elbow-length PVC gloves. If using a hand directed sprayer, wear, in addition: waterproof trousers, boots.

- After use and before eating, drinking or smoking, wash hands, arms and face thoroughly with soap and water. After each day's use, wash gloves and contaminated clothing.

Precautions for Storage:

- Store away from incompatible materials listed in Section 10.
- Keep out of reach of children.
- Store in the closed, original container in a cool, well ventilated area.
- DO NOT store for prolonged periods in direct sunlight.

Section 8 Exposure Controls / Personal Protection

WORKPLACE EXPOSURE STANDARDS (provided for guidance only)

Substance	TWA		STEL	
	ppm	mg/m ³	ppm	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 APRIL 2022 13TH EDITION.

Engineering Controls

Handle in accordance with good industrial hygiene and safety practice. Avoid contact with skin, eyes and clothing. Wash hands before breaks and at the end of workday.

Personal Protection Equipment



Eyes	Protective glasses or goggles should be worn when this product is being used. Failure to protect your eyes may cause them harm. Emergency eye wash facilities are also recommended in an area close to where this product is being used.
Hands	The information at hand indicates that this product is not harmful and that normally no special skin protection is necessary. However, we suggest that you routinely avoid contact with all chemical products and that you wear suitable gloves (preferably elbow-length) when handling this product.
Skin	Complete suit protecting against chemicals, The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.
Respiratory	For nuisance exposures use type P95 (US) or type P1 (EU EN 143) particle respirator. For higher level protection use type OV/AG/P99 (US) or type ABEK-P2 (EU EN 143) respirator cartridges. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).
General	Wash hands before breaks and at the end of workday.

Section 9 Physical and Chemical Properties

Appearance

Liquid

Colour	Amber liquid
Odour	Not available
Odour Threshold	Not available
pH	4.0-6.0
Boiling Point	Not available
Melting Point	Not available
Freezing Point	Not available
Flash Point	Not available
Flammability	Not flammable
Upper and Lower Explosive Limits	Not available
Vapour Pressure	Not available
Vapour Density	Not available
Relative Density	Approximately 0.98
Water Solubility	Emulsifies in water
Partition Coefficient:	Not applicable
Auto-ignition Temperature	Not available
Decomposition Temperature	Not available
Kinematic Viscosity	Not available
Particle Characteristics	Not available

Section 10. Stability and Reactivity

Stability of Substance	This product is stable under normal conditions.
Possibility of hazardous reactions	Not available
Conditions to Avoid	Extreme heat, humid air and water.
Materials to avoid:	Decomposes by reaction with strong acids.
Hazardous Decomposition Products	May include nitrogen, sulphur and carbon oxides. Heating or fire can release toxic gas.

Section 11 Toxicological Information

Acute Effects:

Oral	Rats: LD50: 1360 mg/Kg for Clethodim tech
Dermal	Rats: LD50>5000mg/kg for Clethodim tech
Inhalation	Rats: LC50>3.9 mg/l (total aerosol). for Clethodim tech
Eye Irritant/Corrosive	Product Serious eye damage/irritation
Skin Irritant/Corrosive	Moderate (Rabbits)
Sensitisation Effects	Not a skin sensitizer (guinea pigs)

Chronic Effects:

Carcinogenicity	Not triggered as hazardous.
Reproductive Toxicity	Not triggered as hazardous.
Teratogenic Effects	Not triggered as hazardous.
Germ Cell Mutagenicity	Not triggered as hazardous.
Aspiration	May cause respiratory irritation
STOT/SE	Not triggered as hazardous.

STOT/RE

Not triggered as hazardous.

Section 12. Ecotoxicological Information

Persistence and degradability

Clethodim is rapidly degradable. Biodegradable. DT50 (soil) 0.5 days (typical)

Bioaccumulative potential

Octanol-water partition coefficient LogP = 4.14 (high)

Basis for Assessment

Ecotoxicological data has not been determined specifically for this product. Data below is for the active ingredient unless otherwise stated.

Acute Toxicity - Fish LC50 (96 h) for rainbow trout 67, bluegill sunfish >120 mg/l.

Acute Toxicity Daphnia

LC50 (48 h) >120 mg/l; NOEC 60 mg/l. for Clethodim.

Acute Toxicity Algae

EC50 (5 d) for freshwater algae 57.8 mg/l. for Clethodim.

Acute Toxicity -Other Organisms

Bird: LD50 (oral, quail) >2000mg/kg for Clethodim.

Bees: Not harmful for Clethodim.

Worms: LC50 for worms 454 mg/kg soil; NOEL 316 mg/kg soil for Clethodim.

Section 13. Disposal Considerations

Disposal Method:

Triple or preferably pressure rinse containers before disposal. Add rinsing to spray tank. DO NOT dispose of undiluted chemicals on site. If recycling, replace cap and return clean containers to recycler or designated collection point. If not recycling, break, crush or puncture and bury empty containers in a local authority landfill. If no landfill available, bury the containers below 500mm in a disposal pit specifically marked and set up for this purpose clear of waterways, desirable vegetation and tree roots. Empty containers and product should not be burnt. Dispose of washings, contaminated materials, used absorbents and other waste materials as directed by local regulations.

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 5433:2020 and SNZ HB 5433:2021



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 (Clethodim, 36%)
Marine Pollutant	Yes
Special Provisions	If the product's individual container is below 5kg/L, 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 2020

EPA Approval Code: HSR100646

HSW (HS) Regulations 2017 and EPA Notices	Trigger Quantity
Certified Handler	Not required
Location Certificate	Not required
Tracking Trigger Quantities	Not required
Signage Trigger Quantities	100L
Emergency Response Plan	100L
Secondary Containment	100L
Restriction of Use:	Use as for intended use.

Section 16 Other Information

Glossary

Cat	Category
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 April 2022 edition.
3. Assigning a hazardous substance to a HSNO Approval (Aug 2013).
4. Transport of Dangerous goods on land NZS 5433:2020
5. HSW (Hazardous Substances) Regulations 2017

Disclaimer



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