

Infosafe No™ 3NUA1	Issue Date : May 2024	ISSUED by NUFARMNZ
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 Product Name **THISTROL® PLUS**

Section 1 - Identification

Product Identifier	THISTROL® PLUS
Product Code	00992
Product Type	Herbicide
Company Name	Nufarm NZ
Address	Central Park, Building 3, Level 4, 666 Great South Road Ellerslie Auckland 1051 New Zealand
Telephone/Fax Number	Tel: 0-9-270 4150
Emergency Phone Number	0800 651 911
Email	nzinfo@nufarm.com
Recommended uses and any restrictions on use or supply	Selective herbicide for controlling broadleaf weeds in young and established pastures, cereals, peas and in white clover and grass seed crops.
Other Information	This SDS describes, to the best of our knowledge, the properties of the concentrated product. The physical properties and some of the assessments do not apply to the properties of the product once it has been diluted for application. Acute health effects of the diluted product are likely to be much less severe.

Section 2 - Hazard(s) Identification

GHS classification of the substance/mixture	Acute oral toxicity: Category 4 Serious eye damage Category 1 Skin sensitization: Category 1 Reproductive toxicity: Category 2 Specific target organ toxicity - repeated exposure: Category 2 Hazardous to the terrestrial environment: Hazardous to soil organisms Hazardous to the terrestrial environment: Hazardous to terrestrial vertebrates Hazardous to the aquatic environment acute Category 1 Hazardous to the aquatic environment chronic Category 1
Signal Word (s)	DANGER
Hazard Statement (s)	H302 Harmful if swallowed. H332 Harmful if inhaled. H312 Harmful in contact with skin. H317 May cause an allergic skin reaction. H361 Suspected of damaging fertility or the unborn child. H373 May cause damage to the liver from repeated oral exposure at high doses. H318 Causes serious eye damage. H410 Very toxic to aquatic life with long lasting effects. H421 Hazardous to soil organisms. H433 Harmful to terrestrial vertebrates.
Precautionary Statement – General	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.
Pictogram (s)	Exclamation mark, Corrosion, Health hazard, Environment



Precautionary Statement – Prevention	P202 Do not handle until all safety precautions have been read and understood. P260 Do not breathe dust/fume/gas/mist/vapours/spray. P261 Avoid breathing dust/fume/gas/mist/vapours/spray. P264 Wash hands and face thoroughly after handling. P270 Do not eat, drink or smoke when using this product. P271 Use only outdoors or in a well-ventilated area.
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Precautionary Statement – Response	<p>P272 Contaminated work clothing should not be allowed out of the workplace.</p> <p>P273 Avoid release to the environment.</p> <p>P280 Wear protective gloves/protective clothing/eye protection/face protection/hearing protection.</p> <p>P301+P312 IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell.</p> <p>P302+P352 IF ON SKIN: Wash with plenty of water.</p> <p>P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.</p> <p>P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.</p> <p>P308+P313 IF exposed or concerned: Get medical advice/attention.</p> <p>P310 Immediately call a POISON CENTER/doctor.</p> <p>P312 Call a POISON CENTER/doctor if you feel unwell.</p> <p>P314 Get medical advice/attention if you feel unwell.</p> <p>P330 Rinse mouth.</p> <p>P333+P313 If skin irritation or rash occurs: Get medical advice/attention.</p> <p>P363 Wash contaminated clothing before reuse.</p> <p>P391 Collect spillage.</p>
Precautionary Statement – Disposal	<p>P501 Dispose of contents/container to an approved landfill.</p>

Section 3 - Composition and Information on Ingredients

Chemical Characterization Liquid

Ingredients	Name	CAS	Proportion
	MCPB acid (present as the dimethylamine salt)	94-81-5 (acid)	375 g/L
	MCPA (present as the dimethylamine salt)	2039-46-5	25 g/L
	Water, other ingredients (non-hazardous)		To volume

Section 4 - First Aid Measures

First-aid Measures	For advice contact the National Poisons Centre 0800 POISON (0800 764 766) or a doctor immediately. Begin artificial respiration if the victim is not breathing. Use mouth-to-nose rather than mouth-to-mouth. Obtain medical attention.
Inhalation	Remove patient to fresh air. Lay down and keep warm and rested. If breathing is shallow or has stopped ensure airway is clear and apply resuscitation. Seek medical assistance immediately.
Ingestion	Never give anything by mouth to an unconscious person. If swallowed do NOT induce vomiting. For advice, contact the National Poisons Centre (0800 764 766). Seek medical assistance immediately.
Skin	Immediately flush body and clothes with large amounts of water. Remove contaminated clothing and footwear. Wash affected areas with soap and water. If a large area is affected seek medical assistance.
Eye	Flush eyes with plenty of water for 15 minutes holding eyelids open if necessary. Remove contact lenses if present and easy to do. Seek medical assistance.
First-aid Facilities	Facilities storing or utilizing this material should be equipped with an eyewash facility and safety shower.
Advice to Doctor	Treat symptomatically.

Section 5 - Firefighting Measures

Suitable Extinguishing Media	If involved in a fire, the product will not burn. Choose extinguishing media to suit the burning material. Water fog, foam, carbon dioxide or dry chemical.
Hazards from Combustion Products	May emit toxic fumes of hydrogen chloride or phosgene if involved in fires or exposed to extreme heat.

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Special protective equipment for fire-fighters	Full protective clothing and self-contained breathing apparatus.
Specific Methods	Keep up wind. Do not allow washings to reach sewage or effluent systems.
Hazchem Code	2X
Decomposition Temperature	Information is not available.
Other Information	Location Certificate: Not applicable Hazardous Atmosphere Zone: Not applicable Number of Fire Extinguishers: Not applicable

Section 6 - Accidental Release Measures

Spills and Disposal	Wear protective clothing. Clear area of unprotected personnel. Contain liquid spill and absorb with sand, soil or absorbent granules. If spill does enter waterways contact the local authority. Collect in an appropriate sealable container for disposal in an approved landfill.
Personal Protection	For appropriate personal protective equipment (PPE), refer Section 8.
Environmental Precautions	Prevent from entering drains, waterways or sewers. This product is a herbicide and spills can damage crops, pastures and desirable vegetation.

Section 7 - Handling and Storage

Precautions for Safe Handling	The person mixing or applying THISTROL PLUS must be a 'Qualified Contractor' or a 'Qualified Person'. The spray mixture may also be prepared by a 'Qualified Loader'. It is the duty of the PCBU that a person who uses, handles, manufactures or stores a hazardous substance (including hazardous waste) is provided information, instruction and training in accordance with Regulation 4.5 of the Health and Safety at work (Hazardous Substances) Regulations 2017. Avoid skin and eye contact and inhalation of spray mist. This product must not be applied onto or into water. BEWARE: Spray drift hazard. Apply this product carefully. Spray drift may cause serious damage to other desirable plants. CERTIFIED HANDLER: Is not required. TRACKING: Is not required. RECORD KEEPING: Records of use, as described in NZS 8409 Management of Agrichemicals, must be kept if 3L or more is applied within 24 hours.
Conditions for safe storage, including any incompatibilities	Keep out of reach of children. Store in original container tightly closed and in a locked, dry, cool area away from foodstuffs, fertilisers and seeds. Storage must be in accordance with NZS Management of Agrichemicals. Stores containing 100L of THISTROL PLUS require secondary containment and are subject to signage and more than 100L require emergency response plans.
Other Information	Always read the label and any attached leaflet before use. Aggregate Storage Volume Thresholds: When stored with substances of the same hazard classification the aggregate quantity must be considered. For full details refer to the current NZS8409 Management of Agrichemicals and the HSNO Regulations.

Section 8 - Exposure Controls and Personal Protection

Occupational Exposure Limits (OEL)	No exposure limits (WES, TEL or EEL's) have been specifically assigned for this product.
Appropriate Engineering Controls	Handle in well ventilated areas, generally natural ventilation is adequate. When working with the concentrate in confined spaces, it is recommended that forced ventilation be used to remove traces of dimethylamine vapour from the working atmosphere
Personal Protective Equipment	When opening the container, preparing spray and using the prepared spray wear safety goggles, waterproof gloves, washable hat, cotton overalls buttoned to the neck and wrist, and boots.

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Hygiene Measures Do not eat, drink or smoke while using.
Remove protective clothing and wash hands and face thoroughly before meals and after work. Wash protective clothing daily after work.

Section 9 - Physical and Chemical Properties

Form	Liquid
Appearance	Amber liquid.
Odour	Slight ammonia odour.
Decomposition Temperature	Information is not available.
Melting Point	-5°C
Boiling Point	>100°C (water)
Solubility in Water	Soluble
Specific Gravity	1.086
pH	9.0
Vapour Pressure	MCPA & MCPB dimethylamine salts are not volatile.
Vapour Density (Air=1)	Information is not available.
Odour Threshold	Information is not available.
Volatile Component	50%
Partition Coefficient: n-octanol/water	Kow logP = 2.75 (pH1) (25°C) for for active ingredient MCPA. Kow logP >2.73 (pH5) for for active ingredient MCPB.
Flash Point	Not flammable.
Flammability	Information is not available.
Auto-ignition Temperature	Information is not available.
Flammable Limits - Lower	Information is not available.
Flammable Limits - Upper	Information is not available.
Kinematic Viscosity	Information is not available.
Particle Characteristics	Information is not available.
Other Information	(SL) Soluble concentrate

Section 10 - Stability and Reactivity

Chemical Stability	Stable under normal conditions of handling and storage.
Incompatible Materials	Reaction of the concentrate or spray mix with acids will precipitate solid MCPA & MCPB and largely de-activate the product and cause blockages in spray equipment.
Possibility of Hazardous Reactions	May react violently with strong oxidising material such as chlorine. If strong alkalies such as caustic soda are added, dimethylamine vapour will be released.

Section 11 - Toxicological Information

Toxicology Information	<p>MCPA: MCPA is considered to be of moderate toxicity to man. There have been very few reported acute toxic effects on users over many years. Several deaths have been recorded, but all of these have been deliberate suicide, generally using the sodium salt.</p> <p>MCPB: MCPB is of moderate toxicity to man.</p>
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Acute Toxicity - Oral	LD50 (rats) 962-1470mg/kg for active ingredient MCPA. LD50 (male rats) 4300mg/kg for active ingredient MCPB.
Acute Toxicity - Inhalation	LC50 (4h, rats) >6.36mg/L for active ingredient MCPA. LC50 (4h, rats) >1.14mg/L air for active ingredient MCPB.
Acute Toxicity - Dermal	LD50 (rats) >4000mg/kg for active ingredient MCPA. LD50 (rats) >2000mg/kg for active ingredient MCPB.
Ingestion	The concentrate is not considered a serious hazard due to moderate toxicity. However, the concentrate is considered harmful if swallowed, when classified according to Worksafe Criteria.
Skin Corrosion/Irritation	May be harmful if in contact with the skin.
Serious Eye Damage/Irritation	This product is corrosive and causes serious eye damage.
Respiratory Sensitisation	May be harmful if inhaled.
Skin Sensitisation	May cause an allergic skin reaction.
Germ Cell Mutagenicity	Information is not available.
Carcinogenicity	Information is not available.
Reproductive Toxicity	Suspected of damaging fertility or unborn child.
STOT - Single Exposure	Information is not available.
STOT - Repeated Exposure	May cause liver damage from repeated oral exposure at high doses.
Aspiration Hazard	Information is not available.
Subchronic/Chronic Toxicity	Liver and kidney damage has been noted in laboratory animals but only after excessive doses.
Other Information	The Australian Acceptable Daily Intake (ADI) for MCPA for a human is 0.01 mg/kg/day, set for the public for daily, lifetime exposure. This is based on the NOEL of 1.1 mg/kg/day, the level determined to show no effects during long term exposure for the most sensitive indicators and the most sensitive species. (Ref: Aust Govt Dept. of APVMA, 'ADI List', Edition 1/2024). The Australian Acceptable Daily Intake (ADI) for MCPB for a human is 0.01 mg/kg/day, set for the public for daily, lifetime exposure. This is based on the NOEL of 1.1 mg/kg/day, the level determined to show no effects during long term exposure for the most sensitive indicators and the most sensitive species. (Ref: Aust Govt Dept. of APVMA, 'ADI List', Edition 1/2024).

Section 12 - Ecological Information

Persistence and Degradability	In soil DT50 <7d after initial lag phase for active ingredient MCPA. In soil DT50 c. 5-7d (5 soil types, pH range 6.2-7.3, o.m. 0.9-3.9%, moisture 2.6-25.9%) for active ingredient MCPA.
Mobility	Information is not available.
Bioaccumulative Potential	Information is not available.
Acute Toxicity - Fish	LC50 (96hr, using MCPA salt solution) for rainbow trout is 50-560mg/L for active ingredient MCPA. LC50 (48hr) for rainbow trout is 75mg/L for active ingredient MCPB.
Acute Toxicity - Daphnia	LC50 (48hr) >190mg/L for active ingredient MCPA.
Acute Toxicity - Algae	EC50 for Selenastrum capricornutum >392mg/L for active ingredient MCPA.
Acute Toxicity - Other Organisms	LD50 (oral and contact) for bees >200µg/bee for active ingredient MCPA. Active ingredient MCPB is not toxic to bees.

Section 13 - Disposal Considerations

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Product Disposal Dispose of product only by using according to the label, or at an approved landfill.

Container Disposal Triple rinse empty container and add rinsate to spray tank. Recycle empty container. Otherwise crush and bury in a suitable landfill.

Section 14 - Transport Information

Transport Information It is good practice not to transport agricultural chemical products with food, food related materials and animal feedstuffs.

UN Number 3082

Proper Shipping Name ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. - (MCPA, MCPB)

Hazard Class 9

Hazchem Code 2X

Packaging Method -

Packing Group III

EPG Number -

IERG Number 47

IMO Marine Pollutant Yes. Environmentally Hazardous Substance mark required.

IMDG EMS F-A, S-F

Other Information Do not carry this product on a passenger service vehicle.

Segregation: Check the latest Land Transport Rule Dangerous Goods Rule 45001 for additional information. Sea transport may require additional segregation. Refer NZS5433 sea segregation for details.

Section 15 - Regulatory Information

National and or International Regulatory Information Registered pursuant to the ACVM Act 1997, No. P5956
See www.foodsafety.govt.nz for registration conditions.
Approved pursuant to the HSNO Act 1996, Approval Code HSR000379
See www.epa.govt.nz for approval controls.

Packaging and Labelling KEEP OUT OF REACH OF CHILDREN
READ SAFETY DIRECTIONS BEFORE OPENING OR USING

Section 16 - Any Other Relevant Information

Date of preparation or last revision of SDS August 2020.

Contact Person/Point IN AN EMERGENCY, DIAL 111 - FIRE OR POLICE
24Hr Tollfree Emergency No: 0800 651 911
24Hr Emergency No: National Poisons Centre Phone: 0800 764 766

Revisions Highlighted Various changes and updates made to the document to comply with GHS7.

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