

Infosafe No™ 3NUA1	Issue Date : July 2015	ISSUED by NUFARMNZ
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 Product Name **THISTROL® PLUS**

1. Identification

GHS Product Identifier	THISTROL® PLUS
Product Code	00992
Product Type	Herbicide
Company Name	Nufarm NZ
Address	6 Manu Street, Otahuhu Auckland 2024 New Zealand
Telephone/Fax Number	Tel: 0-9-270 4150 Fax: 0-9-270 4159
Emergency phone number	0800 651 911
Email	info@nz.nufarm.com
Recommended use of the chemical and restrictions on use	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.

2. Hazard Identification

Other Information	6.1 D acute toxicant, 6.5B sensitiser, 6.8B reproductive or developmental toxicant, 6.9B target organ toxicant, 8.3A eye corrosive, 9.1A aquatic toxicant, 9.2A soil toxicant, 9.3C terrestrial vertebrate toxicant TOXICITY Harmful-may be harmful if swallowed, inhaled or absorbed through the skin. May cause sensitisation from prolonged skin contact. May cause liver damage from repeated oral exposure at high doses. May cause reproductive/development damage from repeated oral exposure at high doses. CORROSIVE Danger-this product is corrosive and may cause eye damage. ECOTOXIC Very toxic to aquatic organisms with long lasting effects. Very toxic to the soil environment. Selective herbicide-very toxic to some plant species. Harmful to terrestrial vertebrates.
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3. Composition/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

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

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Skin	induce vomiting. For advice, contact the National Poisons Centre (0800 764 766). Seek medical assistance immediately.
Eye contact	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.
First Aid Facilities	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.
Advice to Doctor	Facilities storing or utilizing this material should be equipped with an eyewash facility and safety shower. Treat symptomatically.

5. Fire-fighting 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.
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
Other Information	Location Certificate: Not applicable Hazardous Atmosphere Zone: Not applicable Number of Fire Extinguishers: Not applicable

6. Accidental release measures

Spills & 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.

7. Handling and storage

Precautions for Safe Handling	Avoid skin and eye contact and inhalation of spray mist. APPROVED HANDLER: This product must be under the control of an approved handler when applied in a wide dispersive manner; or used by a commercial contractor. 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. BEWARE: Spray drift hazard. Apply this product carefully. Spray drift may cause serious damage to other desirable plants.
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.

8. Exposure controls/personal protection

Occupational exposure limit values	No exposure limits (WES, TEL or EEL's) have been specifically assigned for this product.
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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.
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.

9. Physical and chemical properties

Form	Liquid
Appearance	Amber liquid
Odour	Slight ammonia odour
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
Volatile Component	50%
Flash Point	Not flammable
Other Information	(SL) Soluble concentrate

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 alkalis such as caustic soda are added, dimethylamine vapour will be released.

11. Toxicological Information

Toxicology Information	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. MCPB: MCPB is of moderate toxicity to man.
Acute Toxicity - Oral	Acute oral LD50 (rat) 962mg/kg (MCPA) Acute oral LD50 (male rats) 4700mg/kg (MCPB)
Acute Toxicity - Dermal	Acute dermal LD50 (rat) >4000mg/kg (percutaneous) (MCPA), >2000mg/kg (MCPB)
Acute Toxicity - Inhalation	Inhalation LC50 (rat) (4hr) >1.14mg/L air (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.
Inhalation	Not considered a serious hazard because MCPA and MCPB (dimethylamine salts) are practically non-volatile; however, inhalation of spray mists should be avoided. Inhalation of the spray is harmful.
Skin	The concentrate may cause irritation and possible damage if contact with the concentrate is prolonged or excessive. Some absorption of MCPA and MCPB through the skin is possible.
Eye	The concentrate may cause irritation and may cause damage if contact is

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prolonged.

Acute over exposure: Headache, nausea and vomiting with possible twitches and spasms in extreme cases.

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: Comm. Dept. of Health and Ageing, Office of Chemical Safety, 'ADI List', December 2014).

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 Health, Office of Chemical Safety, 'ADI List', December 2014).

12. Ecological information

Environmental Protection Do not spray in areas where damage to sensitive plants may result from direct application or spray drift. Do not spray in high winds.

Acute Toxicity - Fish LC50 (rainbow trout): 50-560mg/L (96hr) (MCPA salt solution)
 LC50 (rainbow trout): 75mg/L (48hr) (MCPB)
 LC50 (fathead minnow): 11 mg/L (48hr) (MCPB)

Acute Toxicity - Other Organisms Not toxic to bees.

13. Disposal considerations

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.

14. Transport information

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

U.N. Number 3082

UN proper shipping name ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. - (MCPA, 2.5%; MCPB, 37.5%)

Transport hazard class(es) 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.

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.



Safety Data Sheet

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Packaging & Labelling	HARMFUL * CORROSIVE * ECOTOXIC - keep out of reach of children
Hazard Rating Systems	NFPA/HMIS: 2-1-1

16. Other Information

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	5 yearly review carried out. Various changes and updates made to the document.
Other Information	Supersedes SDS issued September 2009 ...End Of MSDS...

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