



Material Safety Data Sheet

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Infosafe No™ 3NUAE	Issue Date : November 2011	ISSUED by NUFARMNZ
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Product Name **LASSO® MICRO-TECH®**

1. IDENTIFICATION OF THE MATERIAL AND SUPPLIER

Product Name	LASSO® MICRO-TECH®
Product Code	00431
Company Name	Nufarm NZ
Address	6 Manu Street, Otahuhu Auckland 2024 New Zealand
Emergency Tel.	0800 651 911
Telephone/Fax Number	Tel: 0-9-270 4157 Fax: 0-9-270 4159
Email	www.nufarm.co.nz
Recommended Use	For selective pre-emergence weed control in a range of vegetable crops, maize, wheat and barley.
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. HAZARDS IDENTIFICATION

Hazard Classification	Classified as Dangerous Goods according to the LTSA New Zealand.
Risk Phrase(s)	
Other Information	6.1D acute toxicant, 6.5B sensitiser, 6.7B possible carcinogen, 6.9A target organ toxicant, 9.1A aquatic toxicant, 9.2A soil toxicant, TOXICITY Harmful - may be harmful if swallowed, inhaled or absorbed through the skin. May cause sensitisation from prolonged skin contact. Limited evidence of a carcinogenic effect in animal studies. May cause damage to the blood system and lungs from repeated oral exposure at high doses. ECOTOXIC Very toxic to aquatic organisms. Selective herbicide - very toxic to some plant species.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Characterization	Liquid												
Ingredients	<table><thead><tr><th><u>Name</u></th><th><u>CAS</u></th><th><u>Proportion</u></th></tr></thead><tbody><tr><td>Water</td><td>7732-18-5</td><td>30-60 %</td></tr><tr><td>Polymethylene Poly phenylene Isocyanate</td><td>9016-87-9</td><td>0-10 %</td></tr><tr><td>Alachlor</td><td>15972-60-8</td><td>480g/L</td></tr></tbody></table>	<u>Name</u>	<u>CAS</u>	<u>Proportion</u>	Water	7732-18-5	30-60 %	Polymethylene Poly phenylene Isocyanate	9016-87-9	0-10 %	Alachlor	15972-60-8	480g/L
<u>Name</u>	<u>CAS</u>	<u>Proportion</u>											
Water	7732-18-5	30-60 %											
Polymethylene Poly phenylene Isocyanate	9016-87-9	0-10 %											
Alachlor	15972-60-8	480g/L											

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. Seek medical assistance.
First Aid Facilities	Facilities storing or utilizing this material should be equipped with an



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Advice to Doctor eyewash facility and safety shower.
Treat symptomatically.

5. FIRE FIGHTING MEASURES

Suitable Extinguishing Media Water fog, foam, carbon dioxide or dry chemical.

Hazards from Combustion Products Carbon monoxide, hydrogen chloride, nitrogen oxides and hydrogen cyanide.

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. Keep containers cool with water spray. Minimise spread.

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 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.

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 the NZS 8409 Management of Agrichemicals must be kept.
Do not allow drift to occur outside the target area.

Conditions for Safe Storage 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 8409 Management of Agrichemicals.
Stores containing 100L of LASSO MICRO-TECH require secondary containment and are subject to signage, and more than 100L require emergency response plans.

Unsuitable Materials mild steel, aluminium.

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

National Exposure Standards No exposure limits (WES, TEL or EEL's) have been specifically assigned for this product.

Engineering Controls Manufacturers TWA = 10ppb
Handle in well ventilated areas, generally natural ventilation is adequate.

Personal Protective Equipment When opening the container, preparing spray and using the prepared spray wear safety goggles, waterproof gloves, cotton overalls buttoned to the neck and wrist, boots, and a NIOSH approved half face mask with organic vapour cartridge + dust/mist prefilter.

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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.
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9. PHYSICAL AND CHEMICAL PROPERTIES

Form	Liquid
Appearance	Brown coloured suspension
Odour	Slight.
Boiling Point	ca 105°C @ 760mm Hg
Solubility in Water	Disperses in water.
Specific Gravity	1.147
pH Value	~8.5 @ 22°C @ 10g/L
Vapour Pressure	760mm Hg @ 100°C
Viscosity	150cps @ 25°C
Octanol/Water Partition Coefficient	Log Pow = 3.3 (alachlor)
Flash Point	Does not flash
Other Information	(CS) Capsule Suspension

10. STABILITY AND REACTIVITY

Chemical Stability	When stored appropriately this product should show no significant degradation for 2 years from the date of manufacture.
Incompatible Materials	Moderately corrosive to aluminium and carbon steel.
Hazardous Reactions	Corrosive to aluminium and mild steel.
Hazardous Polymerization	Hazardous polymerisation will not occur.

11. TOXICOLOGICAL INFORMATION

Chronic Effects	Alachlor, the active herbicidal ingredient of Lasso Micro-Tech herbicide, has been extensively tested in mutagenicity, teratogenicity, reproductive, acute, sub-chronic and chronic toxicity studies. Chronic dietary administration of alachlor has been shown to cause tumours in laboratory animals.
Mutagenicity	In vitro and in vivo mutagenicity tests: Not mutagenic on the basis of weight-of-evidence analysis.
Carcinogenicity	Limited evidence of a carcinogenic effect in animal studies.
Acute Toxicity - Oral	LD50 (rat) >5,000 mg/kg for similar formulation (no mortality) LD50 (rat) 903mg/kg for alachlor
Acute Toxicity - Dermal	LD50 (rabbit) >2,000 mg/kg for a similar formulation (no mortality)
Acute Toxicity - Inhalation	No 4-hr LC50 at maximum achievable concentration. No mortality. for a similar formulation. LC50 (rat) 1.04mg/kg for alachlor
Eye Irritation	Rabbit, 3 animal, OECD 405 test: Conjunctival redness: 0.89, Conjunctival swelling: 0, Corneal opacity: 0, Iris lesions: 0.11, Days to heal: 3
Skin Irritation	Skin irritation (rabbit) 3 animals, OECD 404 test: Redness: 0.46, Swelling: 0, Days to heal: 3
Skin Sensitisation	Guinea pig, 9-induction Buehler test: Positive incidence: 20% for a similar formulation
Subchronic/Chronic Toxicity	Chronic oral NOAEL (dog) = 1mg/kg bw/day (alachlor) Primary organ = blood and the hematopoietic system (alachlor)
Other Information	The Australian Acceptable Daily Intake (ADI) for alachlor for a human is 0.0005 mg/kg/day, set for the public for daily, lifetime exposure. This is based on the NOEL of 0.5 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 and Environmental Health, 'ADI List', June 2011).

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Hypersensitivity to sulphiting agents may be aggravated by exposure to this product.

12. ECOLOGICAL INFORMATION

Persistence / Degradability	Not rapidly degradable Photochemical degradation: Soil, half life 144.4 days for alachlor Dissipation: Soil, aerobic, 25°C, half life 15-30 days; water half life 23 days for alachlor Hydrolysis: 25°C, pH 6 0% within 30 days
Bioaccumulative Potential	Not bioaccumulative. BCF = 6 for alachlor
Environ. Protection	Do not apply directly to water or wetlands. Do not contaminate water by cleaning of equipment or disposal of wastes.
Acute Toxicity - Fish	LC50 (96hr) for carp (semi-static) is 124mg/L for Lasso Micro-Tech LC50 (96hr) for rainbow trout (static) is 130mg/L for Lasso Micro-Tech
Acute Toxicity - Daphnia	EC50 (48hr) (static) 472mg/L for Lasso Micro-Tech
Acute Toxicity - Algae	EC50 (96hr) (static) green algae 0.006mg/L for alachlor
Acute Toxicity - Other Organisms	LD50 for bobwhite quail is >4061 mg/kg LD50 (48 hr) Honeybees is >238µg/bee (contact); >214µg/bee (oral) LC50 (14d) Earthworms is 387mg/kg dry soil for alachlor EC50 (21d) ryegrass is 9.18µg/kg dry soil for alachlor

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
Proper Shipping Name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. - (alachlor, 48%)
DG 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.

15. REGULATORY INFORMATION

National and or International Regulatory Information	Registered pursuant to the ACVM Act 1997, No. P3792 See www.foodsafety.govt.nz for registration conditions Approved pursuant to the HSNO Act 1996, Approval Code HSR000383 See www.epa.govt.nz for approval controls.
Packaging & Labelling	HARMFUL * ECOTOXIC - keep out of reach of children
Hazard Rating Systems	NFPA/HMIS: 2-1-0



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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
5 yearly review carried out. Various changes and updates made to document.

Revisions

Highlighted

Other Information Supersedes SDS issued December 2006
...End Of MSDS...

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