



# Safety Data Sheet

infosafe  
CS: 1.7.2

Page: 1 of 5

Infosafe No™ 3NU96 Issue Date : March 2015 ISSUED by NUFARMNZ

Product Name **ARCHER®**

## 1. Identification

<b>GHS Product Identifier</b>	ARCHER®
<b>Product Code</b>	00072
<b>Product Type</b>	Selective herbicide
<b>Company Name</b>	Nufarm NZ
<b>Address</b>	6 Manu Street, Otahuhu Auckland 2024 New Zealand
<b>Telephone/Fax Number</b>	Tel: 0-9-270 4150 Fax: 0-9-270 4159
<b>Emergency phone number</b>	0800 651 911
<b>Recommended use of the chemical and restrictions on use</b>	Herbicide for the control of certain broadleaf weeds in a wide range of crops.
<b>Other Information</b>	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

<b>Other Information</b>	9.1B aquatic toxicant, 9.2A soil toxicant, 9.3C terrestrial vertebrate toxicant. ECOTOXIC Toxic to aquatic organisms with long lasting effects. Very toxic to soil environment. Selective herbicide-very toxic to some plant species. Harmful to terrestrial vertebrates.
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## 3. Composition/information on ingredients

<b>Chemical Characterization</b>	Liquid									
<b>Ingredients</b>	<table><thead><tr><th><u>Name</u></th><th><u>CAS</u></th><th><u>Proportion</u></th></tr></thead><tbody><tr><td>Clopyralid (present as the triisopropanolamine salt)</td><td>73455-09-1</td><td>300 g/L</td></tr><tr><td>Other non hazardous ingredients</td><td></td><td>Balance</td></tr></tbody></table>	<u>Name</u>	<u>CAS</u>	<u>Proportion</u>	Clopyralid (present as the triisopropanolamine salt)	73455-09-1	300 g/L	Other non hazardous ingredients		Balance
<u>Name</u>	<u>CAS</u>	<u>Proportion</u>								
Clopyralid (present as the triisopropanolamine salt)	73455-09-1	300 g/L								
Other non hazardous ingredients		Balance								

## 4. First-aid measures

<b>First Aid Measures</b>	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.
<b>Inhalation</b>	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.
<b>Ingestion</b>	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.
<b>Skin</b>	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.
<b>Eye contact</b>	Flush eyes with plenty of water for 15 minutes holding eyelids open if necessary. Seek medical assistance.
<b>First Aid Facilities</b>	Facilities storing or utilizing this material should be equipped with an eyewash facility and safety shower.
<b>Advice to Doctor</b>	Treat symptomatically.

## 5. Fire-fighting measures

Infosafe No™ 3NU96	Issue Date : March 2015	ISSUED by NUFARMNZ
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Product Name **ARCHER®**

<b>Suitable extinguishing media</b>	If involved in a fire, the product will not burn. Choose extinguishing media to suit the burning material.
<b>Hazards from Combustion</b>	May emit toxic fumes of hydrogen chloride or phosgene if involved in fires or exposed to extreme heat.
<b>Products</b>	
<b>Special Protective Equipment for fire fighters</b>	Full protective clothing and self-contained breathing apparatus.
<b>Specific Methods</b>	Keep up wind. Do not allow washings to reach sewage or effluent systems. Keep containers cool with water spray.
<b>Hazchem Code</b>	2X
<b>Other Information</b>	Location Certificate: Not applicable Hazardous Atmosphere Zone: Not applicable Number of Fire Extinguishers: Not applicable

## 6. Accidental release measures

<b>Spills &amp; Disposal</b>	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.
<b>Personal Protection</b>	For appropriate personal protective equipment (PPE), refer Section 8.
<b>Environmental Precautions</b>	Prevent product or washings from entering drains, waterways or sewers, and prevent contamination of soil. This product is a herbicide and spills can damage crops, pastures and desirable vegetation.

## 7. Handling and storage

<b>Precautions for Safe Handling</b>	Avoid skin and eye contact and inhalation of spray mist. APPROVED HANDLER: This product must be under the control of an approved handler when any quantity is being used. The person in charge of a place where the product is sold may sell the substance to a person only if he or she has confirmation that an approved handler at the place where it is to be used. TRACKING: Not applicable. RECORD KEEPING: Records of use as described in NZS 8409 Management of Agrichemicals must be kept if 3L or more of ARCHER is applied within 24 hours. BEWARE: Spray drift hazard. Apply this product carefully. Spray drift may cause serious damage to other desirable plants. Do NOT contaminate dams, rivers or streams, or any other water bodies with chemical or used containers. This product must not be applied onto or into water.
<b>Conditions for safe storage, including any incompatibilities</b>	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 ARCHER are subject to signage, 1,000L require secondary containment and more than 1,000L require emergency response plans.
<b>Additional information on precautions for use</b>	Do not use for treating turf that will be mown and the clippings used for making compost; or made available for collection for, or deposited at, a green waste recycling centre.
<b>Other Information</b>	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

<b>Occupational exposure limit values</b>	No Workplace Exposure Standards (WESSs) have been set for clopyralid. No Environmental Exposure Limits (EELs) have been set for substances containing clopyralid. Tolerable Exposure Limits (TELs) have been derived from Acceptable Daily Exposure (ADE) values. ADE for clopyralid is 0.15mg/kg bw/day PDE (food) = 0.105mg/kg bw/day
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Infosafe No™ 3NU96	Issue Date : March 2015	ISSUED by NUFARMNZ
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 Product Name **ARCHER®**

<b>Appropriate engineering controls</b>	PDE (drinking water) = 0.03mg/kg bw/day Handle in well ventilated areas, generally natural ventilation is adequate.
<b>Personal Protective Equipment</b>	When opening the container, preparing spray and using the prepared spray wear safety goggles, chemically resistant gloves, cotton overalls buttoned to the neck and wrist, and boots.
<b>Hygiene Measures</b>	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. Wash splashes of concentrate from skin immediately.

## 9. Physical and chemical properties

<b>Form</b>	Liquid
<b>Appearance</b>	Clear to dark greenish liquid.
<b>Boiling Point</b>	~100°C at 100KPa.
<b>Solubility in Water</b>	Soluble in water.
<b>Specific Gravity</b>	1.163 @ 20°C
<b>pH</b>	6.5 - 8.5 (neat)
<b>Vapour Pressure</b>	1.33 mPa at 24°C for clopyralid acid
<b>Volatile Component</b>	Water component: ~50%
<b>Flash Point</b>	N/A
<b>Flammability</b>	Non combustible material.
<b>Other Information</b>	(SL) Soluble concentrate

## 10. Stability and reactivity

<b>Chemical Stability</b>	Stable under normal conditions of handling and storage.
<b>Hazardous Polymerization</b>	Hazardous polymerisation is not possible.

## 11. Toxicological Information

<b>Toxicology Information</b>	No harmful effects are expected if the precautions on the label and this SDS are followed.
<b>Acute Toxicity - Oral</b>	LD50 (rat) >5000 mg/kg for a similar formulation
<b>Acute Toxicity - Dermal</b>	LD50 (rat) >2000 mg/kg for for a similar formulation
<b>Acute Toxicity - Inhalation</b>	LC50 (rat) (4hr) >0.38 mg/l for clopyralid
<b>Ingestion</b>	The concentrate is of low toxicity if swallowed. Amounts swallowed incidental to normal handling procedures and use are not expected to cause injury.
<b>Inhalation</b>	The components of the product are of low volatility and no adverse effects are expected from handling the concentrate. When applying the product as a spray avoid breathing in spray mist.
<b>Skin</b>	Not a skin irritant and not harmful by dermal exposure.
<b>Eye</b>	The concentrate may cause irritation of the eyes.
<b>Carcinogenicity</b>	The weight of the evidence is that clopyralid is not carcinogenic.
<b>Reproductive Toxicity</b>	Data indicates no reproductive effects.
<b>Chronic Effects</b>	
<b>Mutagenicity</b>	Data indicates no mutagenic effects.
<b>Other Information</b>	The Australian Acceptable Daily Intake (ADI) for clopyralid for a human is 0.5 mg/kg/day, set for the public for daily, lifetime exposure. This is based on the NOEL of 50 mg/kg/day, the level determined to show no effects during long term exposure for the most sensitive indicators and the most sensitive

Infosafe No™ 3NU96	Issue Date : March 2015	ISSUED by NUFARMNZ
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Product Name **ARCHER®**

species. (Ref: Comm. Dept. of Health and Ageing, Office of Chemical Safety, 'ADI List', June 2014).

## 12. Ecological information

<b>Persistence and degradability</b>	Half life (DT50) in soil for clopyralid is typically 8 - 66 days.
<b>Mobility</b>	Rapid degradation in soil prevents significant downward movement under normal conditions.
<b>Other Precautions</b>	Do not contaminate dams, waterways or sewers with this product or the containers which have held this product.
<b>Environmental Protection</b>	Spray drift can cause damage, read the label for more information.
<b>Acute Toxicity - Fish</b>	The following data is for the active ingredient, clopyralid. LC50 (96hr) for rainbow trout is 103.5 mg/l LC50 (96hr) for bluegill sunfish is 125.4 mg/l EC50 (48hr) is 225 mg/l.
<b>Acute Toxicity - Daphnia</b>	
<b>Acute Toxicity - Algae</b>	EC50 (96h) Algae: Selenastrum capricornutum = 6.9mg/L (clopyralid technical)
<b>Acute Toxicity - Other Organisms</b>	Birds: Not toxic to birds. LD50 for bobwhite quail is >2000mg/kg Bees: Not toxic to bees. LD50 >100µg/bee

## 13. Disposal considerations

<b>Product Disposal</b>	Dispose of product only by using according to the label, or at an approved landfill.
<b>Container Disposal</b>	Triple rinse empty container and add rinsate to spray tank. Recycle empty container. Otherwise crush and bury in a suitable landfill.

## 14. Transport information

<b>Transport Information</b>	It is good practice not to transport agricultural chemical products with food, food related materials and animal feedstuffs.
<b>U.N. Number</b>	3082
<b>UN proper shipping name</b>	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. - (clopyralid 30%)
<b>Transport hazard class(es)</b>	9
<b>Hazchem Code</b>	2X
<b>Packaging Method</b>	-
<b>Packing Group</b>	III
<b>EPG Number</b>	-
<b>IERG Number</b>	47
<b>IMO Marine Pollutant</b>	Yes. Environmentally Hazardous Substance mark required.
<b>IMDG EMS</b>	F-A, S-F
<b>Other Information</b>	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

<b>National and or International Regulatory Information</b>	Registered pursuant to the ACVM Act 1997, No. P7390 See <a href="http://www.foodsafety.govt.nz">www.foodsafety.govt.nz</a> for registration conditions Approved pursuant to the HSNO Act 1996, Approval Code HSR000761 See <a href="http://www.epa.govt.nz">www.epa.govt.nz</a> for approval controls.
<b>Packaging &amp; Labelling</b>	ECOTOXIC HERBICIDE - Not for use in home gardens
<b>Hazard Rating Systems</b>	NFPA/HMIS: 2-0-0

## 16. Other Information



# Safety Data Sheet

infosafe  
CS: 1.7.2

Page: 5 of 5

Infosafe No™ 3NU96	Issue Date : March 2015	ISSUED by NUFARMNZ
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Product Name **ARCHER®**

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

**Highlighted**

**Other Information** Supersedes SDS issued March 2010  
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