

Material Safety Data Sheet

Issue No: 1.2

Issue Date: 23 May 2018

1. Identification of the material/supplier

Product Name: **Diflufenican 500 SC**
Chemical Group: Nicotinamide
Formulation: Suspension Concentrate
Recommended use: Agricultural Herbicide

Supplier: ICA International Chemicals (Pty) Ltd
Address: 28 Planken Street
 Plankenbrug Industrial
 STELLENBOSCH · 7600 · SOUTH AFRICA
Telephone No.: +27 (0) 21 886 9812
Fax No.: +27 (0) 21 886 8209
Emergency Tel No.: Griffon Poison Information Centre: +27 82 446 8946
 Poisons Helpline 0861 555 777

2. Hazard Identification

Hazard Classification: Not classified as hazardous. (National Occupational Health & Safety Commission – NOHSC)
Risk Phrases: N Dangerous for the environment
 R52 Harmful to aquatic organisms
 R53 May cause long-term adverse effects in the aquatic environment.
Safety Phrases: S60 This material and its container should be disposed of as hazardous waste.
 S61 Avoid release to the environment. Refer to special instructions/safety data sheets.

3. Composition/information on ingredients

INGREDIENT(s)	CAS NO.:	Hazardous Classification for ACTIVE INGREDIENT (EU)	Proportion
Diflufenican 2,4-difluoro-2-(α,α,α -trifluoro-m-tolyloxy)- nicotinamide	83164-33-4	Cut-Offs: None Classification: R 52-53 Labelling: N; R: 52/53 S: 61	500 g/L
Other ingredients, including water		non-hazardous	To 100%

4. FIRST AID MEASURES

Show this MATERIAL SAFETY DATA SHEET to a doctor.

INHALATION: *Over-exposure by inhalation is unlikely.* If experiencing respiratory symptoms, remove person to fresh air and keep at rest in a position comfortable for breathing. Obtain medical advice if symptoms persist.
EYES: Rinse eyes immediately with clean water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing while holding eyelids apart. Seek medical advice if irritation continues.
SKIN: Remove contaminated clothing. Rinse affected areas (skin) as soon as possible with plenty of water/shower. Wash contaminated clothing before re-use. Seek medical advice if ongoing symptoms occur.
INGESTION: If swallowed, DO NOT induce vomiting. Never give anything to an unconscious person. Rinse mouth with water. If vomiting does occur, keep on giving fluids. Get medical advice.

5. FIRE FIGHTING MEASURES:

Extinguishing media: Water spray, foam, carbon dioxide, dry powder.
Hazards Dehydrated components may emit oxides of carbon, nitrogen and hydrogen fluoride in a fire.
Precautions for fire fighters The product itself is not flammable and does not burn. Fire fighters should wear full protective gear, including self-contained breathing apparatus.
 If possible and without risk, remove intact containers from exposure to fire. If unable to do so, keep cool with spraying water unto containers. Keep unauthorised persons away from fire.

6. ACCIDENTAL RELEASE MEASURES:

SPILL OR LEAK: Avoid contact with spilled material or contaminated surfaces. Prevent product from entering drains and waterways. Contain spill and absorb with earth, sand clay or other absorbent material. Collect and store in properly labelled, sealed drums for safe disposal. Deal with all spillages immediately.

7. HANDLING AND STORAGE

SAFE HANDLING: Wear gloves and safety goggles during mixing and loading. Keep out of reach of children.

SAFE STORAGE: Store in closed, original container in a cool, dry, well ventilated area. Do not store in direct sunlight for prolonged periods. Always store in original container, never transfer herbicides to soft drink bottles or ANY other containers. Keep separate from food and animal feeding stuff.

8. EXPOSURE CONTROL / PERSONAL PROTECTION

OCCUPATIONAL EXPOSURE LIMITS: TLV not established

ENGINEERING CONTROLS: Facilities should be equipped with an eyewash facility and a safety shower.

PERSONAL PROTECTIVE EQUIPMENT: Respiratory protection is not normally required. Use in well ventilated area. In case of *insufficient ventilation*, wear suitable respiratory equipment.
EYES: Safety glasses or face shield during mixing.
GLOVES: Wear chemical resistant PVC gloves during mixing.

9. PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE (physical form):	Viscous liquid / suspension concentrate
Colour:	Off-white to light brown
Odour;	Without specific odour.
pH:	7 – 9 (CIPAC MT 75)
Storage Stability:	Stable after 14 days at 54°C (CIPAC MT 46.1.6)
Density / Specific Gravity:	~1.19 g/mL at 20 °(Hydrometer) (CIPAC MT 3.1)
Persistent Foaming	Less than 15 mL after 1 minute [recommended application concentration] (CIPAC MT 47.2)
Flammability	Not flammable (CIPAC MT 84)
Oxidising Property	Not an oxidising agent or does not contain any oxidising agent. (EEC guidelines A.21)
Suspensibility:	~ 88% (CIPAC MT 161)
Wet sieve::	<1.0 % (CIPAC MT 185: 75 µm test sieve)
INCOMPATIBILITY:	Incompatible with strong caustic solutions, acid solutions and oxidizing agents. (EPA OPPTS 830.6314)
Explosivity:	Not explosive (EEC guidelines A.14)
Viscosity:	450 – 500 cps (CIPAC MT 22).

10. STABILITY AND REACTIVITY

CHEMICAL STABILITY:	Stable under normal conditions.
CONDITIONS TO AVOID:	Protect from high temperatures..
INCOMPATIBLE MATERIALS:	Incompatible with strong caustic solutions, acid solutions and oxidizing agents.
HAZARDOUS DECOMPOSITION PRODUCTS:	Dehydrated components may emit oxides of carbon, nitrogen and hydrogen fluoride in a fire.

11. TOXICOLOGICAL INFORMATION

ANIMAL ACUTE TOXICITY DATA (ACTIVE INGREDIENT)

Acute Oral:	LD ₅₀ (rat)	> 5000mg/kg
Acute Dermal:	LD ₅₀ (rat)	> 2000mg/kg
INHALATION:	LC ₅₀ rat	> 5.12 mg/L air (4 hour)
DERMAL IRRITATION:	Rabbit (OECD 404)	Not classified as a skin Irritant, but mildly irritating to skin of rabbit..
SKIN SENSITISATION:	Guinea Pig (OECD 406)	Not a skin sensitizer.
EYE IRRITATION:	Rabbit (OECD 405)	Practically non-irritating to the eyes of rabbits.

Diflufenican is not carcinogenic, teratogenic or mutagenic.

12. ECOLOGICAL INFORMATION:

Avoid release to the environment in circumstances *DIFFERENT FROM NORMAL USE*.
DO NOT contaminate streams, rivers or waterways

ECOTOXICITY:	Birds	Very low toxicity to birds. LD ₅₀ mg/kg Bobwhite Quail > 2150mg/kg LD ₅₀ mg/kg Mallard duck > 4000 mg/kg
	Fish:	Chronic 21 day NOEC - Rainbow trout > 0.015 mg l ⁻¹ Carp = Acute LC ₅₀ (96h) > 0.099 mg l ⁻¹ (High)
	<i>Daphnia magna</i> :	Acute 48h EC ₅₀ >0.24 mg l ⁻¹ (moderate)
	Algae:	Acute 72 h EC ₅₀ growth = <i>S.subspicatus</i> 0.00025 mg l ⁻¹ (high)
	Honeybees	Oral >112.3 µg/L; Contact >100 µg/L; Risk is considered to be moderate to low
ECOLOGICAL FATE:	Earthworms	Acute 14 days LC ₅₀ >500 mg/kg ⁻¹ soil. Low toxicity and low acute risk to earthworms. Diflufenican was moderate to high persistent in soil. Diflufenican is slightly mobile to immobile in soil and stable to hydrolysis. It was also stable to aqueous photolysis and non ready biodegradable.

13. DISPOSAL CONSIDERATIONS:

Do not use herbicide containers or packaging material for storing water or food. Triple or preferable pressure rinse empty containers with clean water before disposal. Add rinsing to spray/mixing tank. Do not dispose of undiluted chemical 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 is available bury the containers below 500mm in a disposal pit specifically marked and set up for this purpose clear of any water source (river, dam, spring, or borehole). Empty containers and product should not be burnt.

14. TRANSPORT INFORMATION:

UN NUMBER:	3082
PROPER SHIPPING NAME:	Environmentally hazardous substance, liquid, n.o.s. (contain diflufenican)
CLASS AND SUBSIDIARY RISK(S):	Class 9
PACKING GROUP:	III (minor danger)
HAZCHEM CODE:	None allocated

15. REGULATORY INFORMATION:

AICS (Australia):	All of the components in this product are listed on the Australian Inventory of Chemical Substances.
SUSDP classification (Poison Schedule)	Not scheduled - exempt

16. OTHER INFORMATION

The information contained in this document is based on the information given to us by the raw material suppliers. This Material Safety Data Sheet (MSDS) summarises to our best knowledge the health and safety hazard information of the product and how to safely handle and use the product in the workplace. Each user should read this MSDS and consider the information in the context of how the product will be handled and used to prevent accidents in the normal workplace including in conjunction with other products. Care for the environment is essential for our future.

Abbreviations and Acronyms:	ADG:	Australian Dangerous Goods Code, Rail & road 6 th edition
	CAS Number:	Chemical Abstract Service Registry Number
	NOHSC:	National Occupational Health and Safety Commission

This MSDS is valid for three years from date of issue
END of MSDS