

Infosafe No™ 3NU73 Issue Date : August 2021 DRAFT by NUFARM


 Product Name **ASSOCIATE Herbicide**

Classified as hazardous

1. Identification

GHS Product Identifier	ASSOCIATE Herbicide
Product Code	0095
Product Type	Group B Herbicide
Company Name	NUFARM AUSTRALIA LIMITED. (ABN 80 004 377 780)
Address	103-105 Pipe Road Laverton North Victoria 3026 Australia
Telephone/Fax Number	Tel: +61 3 9282-1000
Emergency phone number	1800 033 498 (24hr Australia)
E-mail Address	SDSANZ@nufarm.com
Recommended use of the chemical and restrictions on use	For the control of certain brush and broadleaf species in native pastures, rights of way and commercial and industrial areas and for the control of certain broadleaf weeds in winter cereal crops, grass pastures and pasture renovation as per the Directions for Use table on the label.
Other Information	This Safety Data Sheet describes the properties of the concentrated product. The physical properties and the assessments may not apply to the properties of the product once it has been diluted for application.

2. Hazard Identification

GHS classification of the substance/mixture	Hazardous to the Aquatic Environment - Long-Term Hazard: Category 1
Signal Word (s)	WARNING
Hazard Statement (s)	H410 Very toxic to aquatic life with long lasting effects.
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 label before use.
Pictogram (s)	Environment 
Precautionary statement – Prevention	P273 Avoid release to the environment.
Precautionary statement – Response	P391 Collect spillage.
Other Information	Poisons Schedule : Not Scheduled

3. Composition/information on ingredients

Ingredients	Name	CAS	Proportion
	Metsulfuron Methyl	74223-64-6	600g/kg
	Silica, amorphous precipitated	112926-00-8	20g/kg
	Kaolin clay	1332-58-7	155g/kg
	Other ingredients (non-hazardous)		Balance

4. First-aid measures

Inhalation Remove affected person to fresh air until recovered. If symptoms develop or

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Ingestion persist, seek medical advice.
Rinse mouth and then drink plenty of water.
If vomiting occurs, give more water to drink to assist dilution.
Do not give anything by mouth to a semi-conscious or unconscious person.

Skin Wash affected areas thoroughly with soap and water.
Remove contaminated clothing and launder before re-use.

Eye contact If in eyes, hold eyelids open and wash with copious amounts of water for at least 15 minutes.
Seek medical advice if irritation develops or persists.

First Aid Facilities If poisoning occurs, contact a doctor or the Poisons Information Centre (Australia) on 13 11 26.

Advice to Doctor 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.

Hazards from Combustion Products Non-combustible.
If involved in a major fire, could evolve oxides of carbon, nitrogen or sulfur.

Special Protective Equipment for fire fighters Breathable air apparatus must be worn when fighting a fire in which this product is involved.

Hazchem Code 2Z

Other Information STOP FIRE WATER FROM ENTERING DRAINS OR WATER BODIES.

6. Accidental release measures

Spills & Disposal Recover the product by sweeping up or vacuuming without raising dust.
Collect spilled material and waste in sealable open-top type containers for disposal.

Personal Protection For appropriate personal protective equipment (PPE), refer Section 8.

7. Handling and storage

Precautions for Safe Handling Avoid generating dusts while handling the product and mixing.

Conditions for safe storage, including any incompatibilities Store in the closed, original container in a dry, well ventilated area, as cool as possible.
Do not store for prolonged periods in direct sunlight.
Keep container tightly sealed and do not store with seed, fertilisers or foodstuffs.

Other Information Equipment that has been used for this chemical should not be used for the application of other materials to sensitive plants, unless it has been washed with chlorine bleach solution as directed on the label.
Always read the label and any attached leaflet before use.

8. Exposure controls/personal protection

Occupational exposure limit values	Name	STEL		TWA		Footnote
		mg/m3	ppm	mg/m3	ppm	
	Silica, amorphous precipitated			10		
	Kaolin clay			10		
Appropriate engineering controls	Handle in well ventilated areas, generally natural ventilation is adequate.					
Personal Protective Equipment	It is good practice to wear suitable personal protective equipment (PPE). When opening the container, preparing spray and using the prepared spray wear cotton overalls buttoned to the neck and wrist and a washable hat, elbow-length PVC gloves and goggles.					
Hygiene Measures	After use and before eating, drinking or smoking, wash hands, arms and face					

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Requirements Concerning Special Training	thoroughly with soap and water. After each day's use, wash contaminated clothing and safety equipment. Check State or Territory regulations that require people who use pesticides in their job or business to have training in the application of the materials.
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9. Physical and chemical properties

Form	Solid
Appearance	Off-white to tan granules
Solubility in Water	Disperses in water.
Vapour Pressure	3.3 x 10 ⁻⁷ mPa (25°C, metsulfuron methyl)
Partition Coefficient: n-octanol/water	Kow Log P is 0.0018 (pH7, 25°C for metsulfuron methyl)
Flammability	Non combustible material.
Other Information	pKa is 3.8 (20°C, metsulfuron methyl)

10. Stability and reactivity

Chemical Stability	Stable under normal conditions. Hydrolyses at pH <7.
Possibility of hazardous reactions	Keep away from strong oxidising agents.
Hazardous Polymerization	Hazardous polymerisation is not possible.

11. Toxicological Information

Acute Toxicity - Oral	LD50 (rat) >5000 mg/kg for metsulfuron methyl
Acute Toxicity - Dermal	LD50 (rabbit) >2000 mg/kg for metsulfuron methyl
Acute Toxicity - Inhalation	LC50 (rat) (4hr) >5 mg/l for metsulfuron methyl
Ingestion	Low toxicity. However, swallowing large amounts of concentrate may cause nausea and vomiting.
Inhalation	Not a likely route of exposure when handling the concentrate. May cause irritation to mucous membranes.
Skin	May irritate the skin.
Eye	The concentrate may cause irritation of the eyes.
Skin Sensitisation	Product is not a skin sensitiser.
Chronic Effects	Based on available data, repeated exposures are not anticipated to cause additional significant adverse effects.
Serious eye damage/irritation	Mild eye irritant.
Skin corrosion/irritation	Mild skin irritant.
Other Information	The Australian Acceptable Daily Intake (ADI) for metsulfuron methyl 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 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', April 2020).

12. Ecological information

Persistence and degradability	Half life in soil is typically 52 days.
Other Precautions	Do not contaminate dams, waterways or sewers with this product or the

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Environmental Protection	containers which have held this product. Spray drift should be avoided, read the label for more information. Do NOT apply, drain or flush equipment on or near desirable trees or other plants, or on an area where their roots extend, or in locations where the chemical may be washed or moved into contact with their roots.
Acute Toxicity - Fish	LC50 (96hr) for rainbow trout and bluegill sunfish is >150 mg/l for metsulfuron methyl
Acute Toxicity - Daphnia	EC50 (48hr) for daphnia is >120 mg/l for metsulfuron methyl.
Acute Toxicity - Algae	EC50 (72hr) for algae 0.045 mg/l.
Acute Toxicity - Other Organisms	The following data is for the active ingredient, metsulfuron methyl. Birds: Not toxic to birds. LD50 for mallard duck is >2510 mg/kg LD50 for bobwhite quail is >5620 mg/kg Bees: Not toxic to bees. LD50 >44.3 µg/bee.

13. Disposal considerations

Product Disposal	On site disposal of the concentrated product is not acceptable. Ideally, the product should be used for its intended purpose. If there is a need to dispose of the product, approach local authorities who hold periodic collections of unwanted chemicals (ChemClear®).
Container Disposal	Do not use this container for any other purpose. Triple or preferably pressure rinse containers before disposal. Add rinsings to the spray tank. Dispose of in accordance with local regulations. If recycling, replace cap and return clean containers to recycler or designated collection point. If not recycling, puncture or shred and bury containers in 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 waterways, desirable vegetation and tree roots. Empty containers and product should not be burnt.

14. Transport information

Transport Information	It is good practice not to transport agricultural chemical products with food, food related materials and animal feedstuffs.
Hazchem Code	2Z
Storage and Transport	Classified as non dangerous for transport according to the Australian Code for the Transport of Dangerous Goods by Road and Rail in packs not exceeding 500 kg (L) or IBCs not exceeding 3000 kg (L) (Special Provision AU01).
UN Number (Sea Transport)	3077
IMO Class/Packing Group	Class 9/PG III
IMO Marine Pollutant	Marine pollutant.
IMO Proper Shipping Name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (metsulfuron-methyl)

15. Regulatory information

Regulatory Information	Australia: WHS regulations (2011) - Schedule 11: classification not listed.
Poisons Schedule	Not Scheduled
Packaging & Labelling	READ SAFETY DIRECTIONS BEFORE OPENING OR USING
Other Information	This product is registered with the Australian Pesticides and Veterinary Medicines Authority (APVMA). APVMA product number: 46361.

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Product Name **ASSOCIATE Herbicide**

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16. Other Information

Date of preparation or last revision of SDS Revised 02/08/2021

Contact Person/Point Normal Hours: SDS Coordinator Phone: +61 3 9282 1000
After Hours: Shift Supervisor Phone: 1800 033 498
...End Of MSDS...

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Safety Data Sheet

according to WHS Regulations

Printing date 17.02.2020

Revision: 17.02.2020

1 Identification

Product Name: GENFARM GLUFOSINATE 200 HERBICIDE

Other Means of Identification: Mixture

Recommended Use of the Chemical and Restriction on Use: Agricultural herbicide

Details of Manufacturer or Importer:

Nutrien Ag Solutions Limited
Level 5, Building A
26 Talavera Road
Macquarie Park NSW 2113

Phone Number: 02 9889 5400

Emergency telephone number: National Poison Information Centre: 13 11 26

2 Hazard(s) Identification

Hazardous Nature:

Classified as Hazardous according to the Globally Harmonised System of Classification and Labelling of Chemicals (GHS) and Safe Work Australia criteria.

Not classified as Dangerous Goods according to the Australian Code for the Transport of Dangerous Goods by Road and Rail. (7th edition)



health hazard

Toxic To Reproduction 1B H360FD May damage fertility. May damage the unborn child.

STOT RE 2 H373 May cause damage to organs through prolonged or repeated exposure.

Signal Word Danger

Hazard Statements

H360FD May damage fertility. May damage the unborn child.

H373 May cause damage to organs through prolonged or repeated exposure.

Precautionary Statements

P201 Obtain special instructions before use.

P202 Do not handle until all safety precautions have been read and understood.

P260 Do not breathe dust/fume/gas/mist/vapours/spray.

P280 Wear protective gloves/protective clothing/eye protection/face protection.

P308+P313 IF exposed or concerned: Get medical advice/attention.

P314 Get medical advice/attention if you feel unwell.

P405 Store locked up.

P501 Dispose of contents/container in accordance with local/regional/national regulations.

3 Composition and Information on Ingredients

Chemical Characterization: Mixtures

Description: Mixture of substances listed below with nonhazardous additions.

Hazardous Components:

CAS: 77182-82-2	Glufosinate ammonium (ISO) Toxic To Reproduction 1B, H360FD; STOT RE 2, H373; Acute Toxicity (Oral) 4, H302; Acute Toxicity (Dermal) 4, H312; Acute Toxicity (Inhalation) 4, H332	20%
CAS: 107-98-2	1-Methoxy-2-propanol [Monopropylene glycol methyl ether] Flammable Liquids 3, H226; STOT SE 3, H336	11%

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Product Name: GENFARM GLUFOSINATE 200 HERBICIDE

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4 First Aid Measures

Inhalation:

If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Seek medical attention if breathing problems develop.

Skin Contact:

In case of skin contact, immediately remove contaminated clothing and wash affected areas with water and soap. Seek medical attention if symptoms occur.

Eye Contact:

In case of eye contact, hold eyelids open and rinse with water for at least 15 minutes. Seek immediate medical attention.

Ingestion:

If swallowed, do not induce vomiting. Immediately rinse mouth with water. Give a glass of water. Never give anything by mouth to an unconscious person. Seek immediate medical attention.

Symptoms Caused by Exposure:

Inhalation: May cause mild irritation, drowsiness and dizziness.

Skin Contact: May cause skin irritation, itchiness and reddening.

Eye Contact: May cause eye irritation, stinging, reddening and watering.

Ingestion: May cause irritation, reddening and burning sensation to mouth and throat.

5 Fire Fighting Measures

Suitable Extinguishing Media: Use fire extinguishing methods suitable to surrounding conditions.

Specific Hazards Arising from the Chemical:

Hazardous combustion products include oxides of carbon nitrogen and phosphorous, other nitrogen compounds, other phosphorous compounds, hydrogen cyanide, smoke and water.

This product is not flammable, but may burn or decompose in a fire.

Containers close to fire should be removed if safe to do so. Use water spray to cool fire exposed containers.

Special Protective Equipment and Precautions for Fire Fighters:

When fighting a major fire wear self-contained breathing apparatus and protective equipment.

6 Accidental Release Measures

Personal Precautions, Protective Equipment and Emergency Procedures:

Wear approved respiratory protection, chemical resistant gloves, protective clothing and safety boots.

Evacuate all non-essential personnel from affected area. Do not breathe vapours. Ensure adequate ventilation. Extinguish all sources of ignition. Avoid sparks and open flames. No smoking.

Environmental Precautions:

In the event of a major spill, prevent spillage from entering drains or water courses.

Methods and Materials for Containment and Cleaning Up:

Stop leak if safe to do so and absorb spill with sand, earth, vermiculite or some other absorbent material. If absorbent material is not available or spill is too large, create a dike to stop spill from spreading. Collect the spilled material and place into a suitable container for disposal.

7 Handling and Storage

Precautions for Safe Handling:

May damage fertility. May damage the unborn child. Pregnant women must not handle this product.

Use of safe work practices are recommended to avoid eye or skin contact and inhalation of vapours. Use only outdoors or in a well-ventilated area.

Food, beverages and tobacco products should not be stored or consumed where this material is in use.

Always wash hands before smoking, eating, drinking or using the toilet. Wash contaminated clothing and

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Product Name: GENFARM GLUFOSINATE 200 HERBICIDE

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other protective equipment before storage or re-use. Provide eyewash fountains and safety showers in close proximity to points of potential exposure.

Conditions for Safe Storage:

Store in a cool, dry and well ventilated area. Keep in original container, tightly closed when not in use. Protect from direct sunlight. Keep away from strong oxidising agents, strong acids and strong bases.

8 Exposure Controls and Personal Protection

Exposure Standards:**CAS: 107-98-2 1-Methoxy-2-propanol [Monopropylene glycol methyl ether]**

WES	STEL: 553 mg/m ³ , 150 ppm TWA: 369 mg/m ³ , 100 ppm
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Engineering Controls:

Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapour below occupational exposure standards.

Respiratory Protection:

Use an approved vapour respirator under conditions where exposure to the substance is apparent (e.g. generation of high concentrations of mist or vapour, inadequate ventilation, development of respiratory tract irritation) and engineering controls are not feasible. See Australian Standards AS/NZS 1715 and 1716 for more information.

Skin Protection:

PVC or butyl rubber gloves. See Australian/New Zealand Standard AS/NZS 2161 for more information. When selecting gloves for use against certain chemicals, the degradation resistance, permeation rate and permeation breakthrough time should be considered.

Occupational protective clothing (depending on conditions in which it has to be used, in particular as regards the period for which it is worn, which shall be determined on the basis of the seriousness of the risk, the frequency of exposure to the risk, the characteristics of the workstation of each worker and the performance of the protective clothing). See Australian/New Zealand Standard AS/NZS 4501 for more information.

Eye and Face Protection:

Eye and face protectors for protection against splashing materials or liquids. See Australian/New Zealand Standard AS/NZS 1337 for more information.

9 Physical and Chemical Properties

Appearance:

Form:	Liquid
Colour:	Blue
Odour:	Slightly pungent odour
Odour Threshold:	No information available
pH-Value:	6.0 - 8.0
Melting point/freezing point:	<0 °C
Initial Boiling Point/Boiling Range:	~96 °C (at 100 kPa)
Flash Point:	Not applicable
Flammability:	Product is not flammable.
Auto-ignition Temperature:	Not applicable
Decomposition Temperature:	No information available
Explosion Limits:	
Lower:	No information available
Upper:	No information available
Vapour Pressure at 20 °C:	2.37 kPa (water vapour pressure)
Relative Density at 20 °C:	1.10

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Product Name: GENFARM GLUFOSINATE 200 HERBICIDE

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Vapour Density: As for water
Evaporation Rate: As for water
Solubility in Water: Completely soluble
Partition Coefficient (n-octanol/water) at 22 °C: <0.1 log POW (at pH 7)

10 Stability and Reactivity

Possibility of Hazardous Reactions: Hazardous polymerisation will not occur.

Chemical Stability: Stable at ambient temperature and under normal conditions of use.

Conditions to Avoid: Direct sunlight.

Incompatible Materials: Strong oxidising agents, strong acids and strong bases.

Hazardous Decomposition Products:

Oxides of carbon nitrogen and phosphorous, other nitrogen compounds, other phosphorous compounds, hydrogen cyanide, smoke and water.

11 Toxicological Information

Toxicity:

LD₅₀/LC₅₀ Values Relevant for Classification:

Oral	LD ₅₀	1910 - 2170 mg/kg (rat)
Inhalation	LC ₅₀ /4 h	3.22 - 4.31 mg/l (rat)

CAS: 77182-82-2 Glufosinate ammonium (ISO)

Oral	LD ₅₀	1,910-2,170 mg/kg (rat)
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CAS: 107-98-2 1-Methoxy-2-propanol [Monopropylene glycol methyl ether]

Oral	LD ₅₀	5,660 mg/kg (rat)
Dermal	LD ₅₀	13,000 mg/kg (rabbit)

Acute Health Effects

Inhalation: May cause mild irritation, drowsiness and dizziness.

Skin: May cause skin irritation, itchiness and reddening.

Eye: May cause eye irritation, stinging, reddening and watering.

Ingestion: May cause irritation, reddening and burning sensation to mouth and throat.

Skin Corrosion / Irritation: Based on classification principles, the classification criteria are not met.

Serious Eye Damage / Irritation: Based on classification principles, the classification criteria are not met.

Respiratory or Skin Sensitisation: Based on classification principles, the classification criteria are not met.

Germ Cell Mutagenicity: Based on classification principles, the classification criteria are not met.

Carcinogenicity: This product does NOT contain any IARC listed chemicals.

Reproductive Toxicity: May damage fertility or the unborn child.

Specific Target Organ Toxicity (STOT) - Single Exposure: May cause drowsiness and dizziness.

Specific Target Organ Toxicity (STOT) - Repeated Exposure:

May cause damage to organs through prolonged or repeated exposure.

Aspiration Hazard: Based on classification principles, the classification criteria are not met.

Chronic Health Effects: Prolonged exposure or delayed treatment may cause permanent eye damage.

Existing Conditions Aggravated by Exposure: No information available

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Product Name: GENFARM GLUFOSINATE 200 HERBICIDE

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Additional toxicological information:

The Australian Acceptable Daily Intake (ADI) for glufosinate ammonium for a human is 0.02 mg/kg/day, set for the public for daily, lifetime exposure. This is based on the NOAEL of 2.1 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: Australian Pesticides and Veterinary Medicines Authority, 'Acceptable Daily Intakes for Agricultural and Veterinary Chemicals', 2020).

12 Ecological Information

Ecotoxicity:

Glufosinate ammonium (ISO):

LC₅₀ /8 day dietary >5000 mg/kg (Japanese quail)**Aquatic toxicity:****CAS: 77182-82-2 Glufosinate ammonium (ISO)**

EC ₅₀	560-1,000 mg/l (daphnia)
LC ₅₀	>1,000 mg/l (bluegill)
	>1,000 mg/l (carp)
	>1,000 mg/l (golden orfe)
	710 mg/l (rainbow trout)
	≥1,000 mg/l (scenedesmus subspicatus)
	37 mg/l (senastrum capricornutum)

CAS: 107-98-2 1-Methoxy-2-propanol [Monopropylene glycol methyl ether]

EC ₅₀ /48 h	500 mg/l (daphnia)
EC ₅₀ /72 h	1,000 mg/l (senastrum capricornutum)
LC ₅₀ /96 h	1,000 mg/l (rainbow trout)

Persistence and Degradability: Biodegradable. Will not accumulate in soils or water.**Bioaccumulative Potential:** Bioaccumulation is not expected to occur.**Mobility in Soil:** No information available**Other adverse effects:** No information available

13 Disposal Considerations

Disposal Methods and Containers: Dispose according to applicable local and state government regulations.**Special Precautions for Landfill or Incineration:**

Please consult your state Land Waste Management Authority for more information.

14 Transport Information

UN Number	Not regulated
Proper Shipping Name	Not regulated
Dangerous Goods Class	Not regulated
Packing Group:	Not regulated
Marine pollutant:	No

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Product Name: GENFARM GLUFOSINATE 200 HERBICIDE

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15 Regulatory Information

Australian Inventory of Chemical Substances:

CAS: 77182-82-2 | Glufosinate ammonium (ISO)

CAS: 107-98-2 | 1-Methoxy-2-propanol [Monopropylene glycol methyl ether]

Standard for the Uniform Scheduling of Drugs and Poisons (SUSMP) - Poison Schedule:

Poisons Schedule: 5

16 Other Information

Date of Preparation or Last Revision: 17.02.2020**Prepared by:** MSDS.COM.AU Pty Ltdwww.msds.com.au
Abbreviations and acronyms:

GHS: Globally Harmonised System of Classification and Labelling of Chemicals

CAS: Chemical Abstracts Service (division of the American Chemical Society)

LC₅₀: Lethal concentration, 50 percentLD₅₀: Lethal dose, 50 percent

IARC: International Agency for Research on Cancer

STEL: Short Term Exposure Limit

TWA: Time Weighted Average

NES: National Exposure Standard (Safe Work Australia - Workplace Exposure Standards For Airborne Contaminants)

Flammable Liquids 3: Flammable liquids – Category 3

Acute Toxicity (Oral) 4: Acute toxicity – Category 4

Toxic To Reproduction 1B: Reproductive toxicity – Category 1B

STOT SE 3: Specific target organ toxicity (single exposure) – Category 3

STOT RE 2: Specific target organ toxicity (repeated exposure) – Category 2

Data altered compared to the previous version:

Section 1: Details of Manufacturer or Importer.

Section 5: Specific Hazards Arising from the Chemical.

Section 7: Precautions for Safe Handling.

Section 8: Exposure Standards

Section 11: Toxicity.

Section 11: Acute Health Effects.

Section 11: Reproductive Toxicity.

Section 11: Additional Toxicological Information.

Section 12: Aquatic Toxicity.

Disclaimer

This SDS is prepared in accord with the Safe Work Australia document "Code of Practice for the Preparation of Safety Data Sheets for Hazardous Chemicals - February 2016"

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Infosafe No™ NU0GN	Issue Date : January 2019	ISSUED by NUFARM
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 Product Name **PULSE PENETRANT**

Classified as hazardous

1. Identification

GHS Product Identifier	PULSE PENETRANT
Product Code	3337
Company Name	NUFARM AUSTRALIA LIMITED. (ABN 80 004 377 780)
Address	103-105 Pipe Road Laverton North Victoria 3026 Australia
Telephone/Fax Number	Tel: +61 3 9282-1000 Fax: +61 3 9282-1001
Emergency phone number	1800 033 498 (24hr Australia)
Recommended use of the chemical and restrictions on use	A non-ionic wetter/spreader/penetrant for use as a spray additive for improved penetration of several agricultural pesticides as per the directions for use table on the label.
Other Information	

2. Hazard Identification

GHS classification of the substance/mixture	IT 4 Acute Toxicity - Inhalation: Category 4
Signal Word (s)	WARNING
Hazard Statement (s)	H332 Harmful if inhaled.
General Precautionary Statement (s)	P101 If medical advice is needed, have product container or label at hand. P102 Keep out of reach of children. P103 Read label before use.
Pictogram (s)	Exclamation mark, The below pictograms are GHS Hazard symbols for workplace use only. See SECTION 14 for Dangerous Goods information.



Precautionary statement – Prevention	P261 Avoid breathing spray. P271 Use only outdoors or in a well-ventilated area. P280 Wear protective gloves, clothing, eye and face protection.
Precautionary statement – Response	P304+P340 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. P312 Call a POISON CENTER or doctor/physician if you feel unwell.
Other Information	Poisons Schedule : Not Scheduled

3. Composition/information on ingredients

Chemical Characterization	Liquid		
Ingredients	<u>Name</u>	<u>CAS</u>	<u>Proportion</u>
	Polyether modified polysiloxane	203133-70-4	1000 g/L

4. First-aid measures

Inhalation	Remove affected person to fresh air until recovered. If breathing is difficult, oxygen may be given by a trained person. Seek medical advice immediately.
Ingestion	If poisoning occurs, contact a doctor or the Poisons Information Centre (Australia) on 13 11 26.
Skin	Wash affected areas thoroughly with soap and water. Remove contaminated clothing and launder before re-use.

Infosafe No™ NU0GN	Issue Date : January 2019	ISSUED by NUFARM
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Product Name **PULSE PENETRANT**

Classified as hazardous

Eye contact	If in eyes, hold eyelids open and wash with copious amounts of water for at least 15 minutes. Seek medical advice immediately.
Advice to Doctor	Treat symptomatically.

5. Fire-fighting measures

Suitable extinguishing media	Water fog, foam, carbon dioxide or dry chemical.
Hazards from Combustion Products	If involved in a major fire, could evolve oxides of carbon and silicon.
Specific hazards arising from the chemical	Do not direct a solid stream of water into hot, burning pools; this may cause frothing and increase fire intensity.
Other Information	STOP FIRE WATER FROM ENTERING DRAINS OR WATER BODIES.

6. Accidental release measures

Spills & Disposal	Contain spill and absorb with clay, sand, soil or proprietary absorbent (such as vermiculite). Collect spilled material and waste in sealable open-top type containers for disposal. On-site disposal of concentrate is not acceptable.
Personal Protection	For appropriate personal protective equipment (PPE), refer Section 8.

7. Handling and storage

Conditions for safe storage, including any incompatibilities	Store in the closed, original container in a cool, well ventilated area. Do not store for prolonged periods in direct sunlight.
Other Information	Always read the label and any attached leaflet before use.

8. Exposure controls/personal protection

Occupational exposure limit values	No exposure standard has been established for this product.
Appropriate engineering controls	Handle in well ventilated areas, generally natural ventilation is adequate.
Personal Protective Equipment	When opening the container and preparing the spray wear cotton overalls buttoned to the neck and wrist and a washable hat, elbow-length PVC gloves and face shield or goggles. When mixed with other products, follow the safety precautions for that product.
Hygiene Measures	After use and before eating, drinking or smoking, wash hands, arms and face thoroughly with soap and water. After each day's use, wash contaminated clothing and safety equipment.

9. Physical and chemical properties

Form	Liquid
Appearance	Clear straw coloured liquid
Odour	Moderate odour
Melting Point	-50°C (pour point)
Boiling Point	>150°C
Solubility in Water	Disperses in water.
Specific Gravity	1.002 @ 25°C
pH	5 @ 1% solution
Vapour Pressure	<1.33 hPa @ 20°C

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 Product Name **PULSE PENETRANT**

Classified as hazardous

Flash Point	143°C
Flammability	Combustible liquid C2. (AS1940 - 2017). A C2 combustible liquid is not a combustible liquid within the meaning of the Australian Code for the Transport of Dangerous Goods by Road & Rail.

10. Stability and reactivity

Chemical Stability	Stable under normal conditions.
Possibility of hazardous reactions	No hazardous reactions known.
Hazardous Polymerization	Hazardous polymerisation is not possible.

11. Toxicological Information

Acute Toxicity - Oral	LD50 (rat) >2000 mg/kg for the formulated product
Acute Toxicity - Dermal	LD50 (rat) >2000 mg/kg for the formulated product
Acute Toxicity - Inhalation	Rat, saturated vapour static, 6hrs: no deaths Aerosol LC50, 4hr, 2 mg/L
Ingestion	Low toxicity. However, swallowing large amounts of concentrate may cause nausea and vomiting.
Inhalation	Breathing in high concentrations of mists or aerosols of this material may cause nausea, headaches and irritation of the nose, throat and respiratory tract.
Skin	Prolonged contact with the concentrate can cause defatting of the skin and may result in dermatitis.
Eye	May irritate the eyes.
Chronic Effects	This material was not mutagenic in an Ames bacterial assay or in three mammalian test systems including the Chinese hamster ovary (CHO)/HGPRT gene mutation assay, a micronucleus cytogenetic assay in mice, and an in vitro mammalian cytogenetic test. In a repeated skin application study with rats, this material caused moderate skin irritation which resolved during a post-application recovery period. There was no evidence for percutaneous cumulative or specific organ toxicity. Findings from a 14-day dietary feeding study with rats show that the high dosage repeated ingestion of this material causes adverse effects on the male and female reproductive tracts. Additional effects seen in this dietary study were increased liver weight, altered blood cytology/chemistry, and thyroid enlargement (primarily hypertrophy, with some hyperplasia). Evidence of partial or complete recovery was found over a 28-day recovery period. Findings from a repeat 9-day aerosol inhalation toxicity study with rats show a no-observable effect level (NOEL) of less than 0.025mg/l. Symptoms of toxicity included rales, gasping, ocular opacity, prostration, hypothermia, reduced body weight gain and food consumption, changes in clinical pathology, decreased thymus weight, and microscopic lesions in the nasal cavity. It is not anticipated that the use of aqueous dilutions of this product would result in this type of aerosol exposure.
Serious eye damage/irritation	Mild eye irritant.
Skin corrosion/irritation	Mild skin irritant.

12. Ecological information

Persistence and degradability	Not readily biodegradable.
Known Harmful Effects on the Environment	No data available.
Other Precautions	Do not contaminate dams, waterways or sewers with this product or the containers which have held this product.

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Product Name **PULSE PENETRANT**

Classified as hazardous

Acute Toxicity - Fish LC50 (96hr) for rainbow trout is 2.1 mg/l

13. Disposal considerations

Product Disposal On site disposal of the concentrated product is not acceptable. Ideally, the product should be used for its intended purpose. If there is a need to dispose of the product, approach local authorities who hold periodic collections of unwanted chemicals (ChemClear®).

Container Disposal Do not use this container for any other purpose. Triple or preferably pressure rinse inner bladder or containers before disposal. Add rinsings to the spray tank. If recycling, replace cap and return clean containers to recycler or designated collection point. If not recycling, puncture or shred and bury containers in 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 waterways, desirable vegetation and tree roots. Empty containers and product should not be burnt.

14. Transport information

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

Storage and Transport Considered non dangerous for road and rail transport (in packaging, including IBCs not greater than 3000 Lt each) by the Australian Code for the Transport of Dangerous Goods by Road and Rail. Ref: ADG7; SP No. AU01.

For bulk shipments as Class 9, use UN 3082, HazChem code 2Z.

UN Number (Sea Transport) 3082

IMO Class/Packing Group Class 9; Packing Group III

IMO Marine Pollutant Marine Pollutant

IMO Proper Shipping Name ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (contains polysiloxane derivative)

15. Regulatory information

Regulatory Information Australia: WHS regulations (2011) - Schedule 11: classification not listed.

Poisons Schedule Not Scheduled

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

Other Information This product is registered with the Australian Pesticides and Veterinary Medicines Authority (APVMA). APVMA product number: 57279.

16. Other Information

Date of preparation or last revision of SDS Revised 10/01/2019
This SDS replaces document dated December 2015.

Contact Person/Point Normal Hours: Mrs Kathleen Marsh Phone: +61 3 9282 1000
After Hours: Shift Supervisor Phone: 1800 033 498

Revisions Highlighted The SDS was reviewed. Minor changes were made to the information. Flammability classification updated in section 9.
...End Of MSDS...

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