

Safety Data Sheet

according to WHS Regulations

Printing date 28.02.2020

Revision: 28.02.2020

1 Identification

Product Name: RELYON TRIPLE 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
Suite 3, Level 1, Building B
11 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 subject to the ADG Code when transported in Australia by Road or Rail in packages 500kg(L) or less; or IBCs (refer to SP AU01). However if transported by Air or Sea, this provision does not apply. Then the product is classed as Dangerous (Class 9 Environmentally Hazardous) by IATA and IMDG/IMSBC respectively. See details below and in Section 14 of this SDS.



skull and crossbones

Acute Toxicity (Inhalation) 3 H331 Toxic if inhaled.



health hazard

Toxic To Reproduction 1B H360 May damage fertility or the unborn child.



corrosion

Serious Eye Damage/Irritation 1 H318 Causes serious eye damage.



environment

Aquatic Acute 1 H400 Very toxic to aquatic life.

Aquatic Chronic 1 H410 Very toxic to aquatic life with long lasting effects.



Acute Toxicity (Oral) 4 H302 Harmful if swallowed.

Skin Corrosion/Irritation 2 H315 Causes skin irritation.

Skin Sensitisation 1 H317 May cause an allergic skin reaction.

STOT SE 3 H335 May cause respiratory irritation.

(Contd. on page 2)

Safety Data Sheet

according to WHS Regulations

Printing date 28.02.2020

Revision: 28.02.2020

Product Name: RELYON TRIPLE HERBICIDE

(Contd. of page 1)

Flammable Liquids 4 H227 Combustible liquid.

Signal Word Danger**Hazard Statements**

H227 Combustible liquid.
 H302 Harmful if swallowed.
 H331 Toxic if inhaled.
 H315 Causes skin irritation.
 H318 Causes serious eye damage.
 H317 May cause an allergic skin reaction.
 H360 May damage fertility or the unborn child.
 H335 May cause respiratory irritation.
 H410 Very toxic to aquatic life with long lasting effects.

Precautionary Statements

P201 Obtain special instructions before use.
 P202 Do not handle until all safety precautions have been read and understood.
 P210 Keep away from flames and hot surfaces. No smoking.
 P261 Avoid breathing dust/fume/gas/mist/vapours/spray.
 P264 Wash hands thoroughly after handling.
 P270 Do not eat, drink or smoke when using this product.
 P271 Use only outdoors or in a well-ventilated area.
 P272 Contaminated work clothing should not be allowed out of the workplace.
 P273 Avoid release to the environment.
 P280 Wear protective gloves/protective clothing/eye protection/face protection.
 P301+P312 IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell.
 P302+P352 IF ON SKIN: Wash with plenty of water.
 P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.
 P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
 P310 Immediately call a POISON CENTER/doctor.
 P308+P313 IF exposed or concerned: Get medical advice/attention.
 P321 Specific treatment (see on this label).
 P330 Rinse mouth.
 P362+P364 Take off contaminated clothing and wash it before reuse.
 P333+P313 If skin irritation or rash occurs: Get medical advice/attention.
 P370+P378 In case of fire: Use to extinguish: CO₂, powder or water spray.
 P391 Collect spillage.
 P403+P233 Store in a well-ventilated place. Keep container tightly closed.
 P403+P235 Store in a well-ventilated place. Keep cool.
 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.

(Contd. on page 3)

Safety Data Sheet

according to WHS Regulations

Printing date 28.02.2020

Revision: 28.02.2020

Product Name: RELYON TRIPLE HERBICIDE

(Contd. of page 2)

Hazardous Components:		
CAS: 94-74-6	MCPA (ISO) ⚠ Serious Eye Damage/Irritation 1, H318; ⚠ Aquatic Acute 1, H400; Aquatic Chronic 1, H410; ⚠ Acute Toxicity (Oral) 4, H302; Skin Corrosion/Irritation 2, H315	25%
CAS: 1689-99-2	Bromoxynil octanoate (ISO) ⚠ Acute Toxicity (Inhalation) 3, H331; ⚠ Toxic To Reproduction 2, H361; ⚠ Aquatic Chronic 1, H410; ⚠ Acute Toxicity (Oral) 4, H302; Skin Sensitisation 1, H317	25%
CAS: 872-50-4	N-methyl-2-pyrrolidone ⚠ Toxic To Reproduction 1B, H360D; ⚠ Skin Corrosion/Irritation 2, H315; Serious Eye Damage/Irritation 2A, H319; STOT SE 3, H335; Flammable Liquids 4, H227	20.6%
CAS: 83164-33-4	Diflufenican Aquatic Chronic 3, H412	2.5%

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 medical attention.

Ingestion:

If swallowed, do not induce vomiting. Immediately rinse mouth with water. Never give anything by mouth to an unconscious person. Seek medical attention if symptoms occur.

If large amounts of concentrate (>15 mL) have been swallowed and medical assistance is more than 30 minutes away the induction of vomiting should be considered, preferably based on medical advice.

Symptoms Caused by Exposure:

Inhalation: Toxic if inhaled. May cause respiratory irritation. Inhalation may cause headaches, dizziness and other central nervous system (CNS) effects.

Skin Contact: Causes skin irritation. May cause an allergic skin reaction.

Eye Contact: Causes serious eye damage.

Ingestion: Harmful if swallowed. May cause headache, nausea, dizziness and weakness.

5 Fire Fighting Measures

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

Specific Hazards Arising from the Chemical:

Hazardous combustion products include hydrogen bromide, hydrogen chloride, hydrogen cyanide and other compounds of chlorine, bromine and nitrogen.

Combustible liquid.

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.

(Contd. on page 4)

Safety Data Sheet

according to WHS Regulations

Printing date 28.02.2020

Revision: 28.02.2020

Product Name: RELYON TRIPLE HERBICIDE

(Contd. of page 3)

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.

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. Collect the spilled material and place into a suitable container for disposal.

7 Handling and Storage

Precautions for Safe Handling:

May damage fertility or the unborn child. Pregnant women should 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 other protective equipment before storage or re-use. Contaminated work clothing must not be allowed out of the workplace. 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 container tightly closed when not in use. Protect from heat, sparks, open flames, hot surfaces and direct sunlight. Keep away from strong oxidising agents, chlorates, nitrates, nitric acid and organic peroxides. Do not store near fertilisers, fungicides or other pesticides.

8 Exposure Controls and Personal Protection

Exposure Standards:
CAS: 872-50-4 N-methyl-2-pyrrolidone

WES	STEL: 309 mg/m ³ , 75 ppm TWA: 103 mg/m ³ , 25 ppm Sk
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Engineering Controls:

Maintain air concentration below occupational exposure standards, providing adequate ventilation.

Respiratory Protection:

Respiratory protection is not required under normal use conditions. 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:

Elbow-length PVC gloves are recommended. 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.

(Contd. on page 5)

Safety Data Sheet

according to WHS Regulations

Printing date 28.02.2020

Revision: 28.02.2020

Product Name: RELYON TRIPLE HERBICIDE

(Contd. of page 4)

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:	Dark brown
Odour:	Typical solvent hydrocarbon odour
Odour Threshold:	No information available
pH-Value:	Acidic
Melting point/freezing point:	No information available
Initial Boiling Point/Boiling Range:	No information available
Flash Point:	75 °C
Flammability:	Combustible liquid
Auto-ignition Temperature:	No information available
Decomposition Temperature:	No information available
Explosion Limits:	
Lower:	No information available
Upper:	No information available
Vapour Pressure:	No information available
Relative Density:	>1
Vapour Density:	No information available
Evaporation Rate:	No information available
Solubility in Water:	Emulsifies into water.
Partition Coefficient (n-octanol/water):	No information available
Viscosity:	No information available

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: Heat, sparks, open flames, hot surfaces and direct sunlight.

Incompatible Materials: Strong oxidising agents, chlorates, nitrates, nitric acid and organic peroxides.

Hazardous Decomposition Products:

Hydrogen bromide, hydrogen chloride, hydrogen cyanide and other compounds of chlorine, bromine and nitrogen.

11 Toxicological Information

Toxicity:**LD₅₀/LC₅₀ Values Relevant for Classification:****CAS: 94-74-6 MCPA (ISO)**

Oral	LD ₅₀	700 mg/kg (rat)
Dermal	LD ₅₀	>2,000 mg/kg (rat)
Inhalation	LC ₅₀ /4 h	>3.1 mg/l (rat)

CAS: 1689-99-2 Bromoxynil octanoate (ISO)

Oral	LD ₅₀	238 mg/kg (rat)
Dermal	LD ₅₀	>2,000 ml/kg (rat)

(Contd. on page 6)

Safety Data Sheet

according to WHS Regulations

Printing date 28.02.2020

Revision: 28.02.2020

Product Name: RELYON TRIPLE HERBICIDE

(Contd. of page 5)

Inhalation	LC ₅₀ /4 h	0.72 mg/l (rat)
CAS: 872-50-4 N-methyl-2-pyrrolidone		
Oral	LD ₅₀	3,914 mg/kg (rat)
Dermal	LD ₅₀	8,000 mg/kg (rabbit)
CAS: 83164-33-4 Diflufenican		
Oral	LD ₅₀	>1,000 mg/kg (mice)
		>2,000 mg/kg (rat)
		>5,000 mg/kg (rabbit)
Dermal	LD ₅₀	>2,000 mg/kg (rat)
Inhalation	LC ₅₀ /4 h	>2.34 mg/l (rat)

Acute Health Effects**Inhalation:**

Toxic if inhaled. May cause respiratory irritation. Inhalation may cause headaches, dizziness and other CNS effects.

Skin: Causes skin irritation. May cause an allergic skin reaction.

Eye: Causes serious eye damage.

Ingestion: Harmful if swallowed. May cause headache, nausea, dizziness and weakness.

Skin Corrosion / Irritation: Causes skin irritation.

Serious Eye Damage / Irritation: Causes serious eye damage.

Respiratory or Skin Sensitisation: May cause an allergic skin reaction.

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 respiratory irritation.

Specific Target Organ Toxicity (STOT) - Repeated Exposure:

Based on classification principles, the classification criteria are not met.

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

Chronic Health Effects:

Repeated or prolonged skin exposure may cause de-fatting of the skin, dermatitis and possible sensitisation. Chronic over-exposure may cause weight loss and damage to liver and kidneys.

Existing Conditions Aggravated by Exposure: No information available

Additional toxicological 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 NOAEL 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.

The ADI for bromoxynil for a human is 0.003 mg/kg/day. This is based on the NOAEL of 0.3 mg/kg/day.

The ADI for diflufenican for a human is 0.2 mg/kg/day. This is based on the NOAEL of 16.3 mg/kg/day.

(Ref: Australian Pesticides and Veterinary Medicines Authority, 'Acceptable Daily Intakes for Agricultural and Veterinary Chemicals', 2020).

12 Ecological Information

Ecotoxicity:

This product is toxic to some bird species.

Bromoxynil octanoate:

LC50 = 50 mg/kg (pheasants)

(Contd. on page 7)

Safety Data Sheet

according to WHS Regulations

Printing date 28.02.2020

Revision: 28.02.2020

Product Name: RELYON TRIPLE HERBICIDE

(Contd. of page 6)

LC50 = 100 mg/kg (bobwhite quail)

MCPA:

LC50 = 377 mg/kg (bobwhite quail)

This product is not toxic to bees.

Aquatic toxicity:

Very Toxic to aquatic life with long lasting effects.

CAS: 94-74-6 MCPA (ISO)	
LC ₅₀ /96 h	>135 mg/l (bluegill)
LC ₅₀ /48 h	>190 mg/l (daphnia)
	50-560 mg/l (rainbow trout)
CAS: 1689-99-2 Bromoxynil octanoate (ISO)	
LC ₅₀	0.46 mg/l (goldfish)
	0.05 mg/l (rainbow trout)
CAS: 872-50-4 N-methyl-2-pyrrolidone	
EC ₅₀ /24 h	>1,000 mg/l (daphnia)
EC ₅₀ /72 h	>500 mg/l (green algae)
LC ₅₀ /96 h	1,072 mg/l (fathead minnow)
	>5,000 mg/l (rainbow trout)
CAS: 83164-33-4 Diflufenican	
LC ₅₀ /96 h	105 mg/l (carp)
	56-100 mg/l (rainbow trout)
LC ₅₀ /48 h	>10 mg/l (daphnia)

Persistence and Degradability:

This product has low persistence in soil.

Bromoxynil has a half-life in soil of 10 - 14 days.

MCPA has a half-life in soil of 14 - 30 days.

Bioaccumulative Potential: No further relevant information available.**Mobility in Soil:** No further relevant information available.**Other adverse effects:** No further relevant 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
ADG

Not subject to the ADG Code when transported in Australia by Road or Rail in packages 500kg(L) or less; or IBCs (refer to SP AU01).

IMDG, IATA

UN3082

(Contd. on page 8)

Safety Data Sheet

according to WHS Regulations

Printing date 28.02.2020

Revision: 28.02.2020

Product Name: RELYON TRIPLE HERBICIDE

(Contd. of page 7)

Proper Shipping Name**ADG****IMDG**

Not regulated

ENVIRONMENTALLY HAZARDOUS SUBSTANCE,
LIQUID, N.O.S. (MCPA (ISO), Bromoxynil octanoate
(ISO)), MARINE POLLUTANT**IATA**ENVIRONMENTALLY HAZARDOUS SUBSTANCE,
LIQUID, N.O.S. (MCPA (ISO), Bromoxynil octanoate
(ISO))**Dangerous Goods Class****ADG Class:****IMDG Class:**

Not regulated

9 Miscellaneous dangerous substances and articles.

Packing Group:**ADG****IMDG, IATA**

Not regulated

III

Marine pollutant:

Yes

Symbol (fish and tree)

EMS Number:

F-A,S-F

Hazchem Code:

•3Z

Special Provisions:

274, 331, 335, 375, AU01

Limited Quantities:

5L

Packagings & IBCs - Packing Instruction:

P001, IBC03, LP01

Packagings & IBCs - Special Packing Provisions: PP1**Portable Tanks & Bulk Containers - Instructions:** T4**Portable Tanks & Bulk Containers - Special****Provisions:**

TP1, TP29

15 Regulatory Information

Australian Inventory of Chemical Substances:

CAS: 94-74-6	MCPA (ISO)
CAS: 1689-99-2	Bromoxynil octanoate (ISO)
CAS: 872-50-4	N-methyl-2-pyrrolidone
CAS: 83164-33-4	Diflufenican

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

Poisons Schedule: 6

16 Other Information

Date of Preparation or Last Revision: 28.02.2020**Prepared by:** MSDS.COM.AU Pty Ltd

www.msds.com.au

Abbreviations and acronyms:

ADG: Australian Dangerous Goods

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

GHS: Globally Harmonised System of Classification and Labelling of Chemicals

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

LC₅₀: Lethal concentration, 50 percent

(Contd. on page 9)

Safety Data Sheet

according to WHS Regulations

Printing date 28.02.2020

Revision: 28.02.2020

Product Name: RELYON TRIPLE HERBICIDE

(Contd. of page 8)

LD₅₀: 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 4: Flammable liquids – Category 4

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

Acute Toxicity (Inhalation) 3: Acute toxicity – Category 3

Skin Corrosion/Irritation 2: Skin corrosion/irritation – Category 2

Serious Eye Damage/Irritation 1: Serious eye damage/eye irritation – Category 1

Serious Eye Damage/Irritation 2A: Serious eye damage/eye irritation – Category 2A

Skin Sensitisation 1: Skin sensitisation, Hazard Category 1

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

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

Toxic To Reproduction 2: Reproductive toxicity – Category 2

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

Aquatic Acute 1: Hazardous to the aquatic environment, short-term (Acute). Category 1

Aquatic Chronic 1: Hazardous to the aquatic environment, long-term (Chronic). Category 1

Aquatic Chronic 3: Hazardous to the aquatic environment, long-term (Chronic). Category 3

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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