

Infosafe No™ 3NUYU	Issue Date : June 2017	ISSUED by NUFARM
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 Product Name **DIRECTOR 480 EC Herbicide**

Classified as hazardous

1. Identification

GHS Product Identifier	DIRECTOR 480 EC Herbicide
Product Code	0619 NUL2683
Product Type	Group Q 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 Fax: +61 3 9282-1001
Emergency phone number	1800 033 498 (24hr Australia)
Recommended use of the chemical and restrictions on use	For the control of certain annual grasses in rice and certain annual broadleaf weeds in cucurbits, green beans, navy beans, poppies, potatoes and tobacco as specified in 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	CA2 Carcinogenicity: Category 2 ED1 Eye Damage/Irritation: Category 1 OT4 Acute Toxicity - Oral: Category 4 IT4 Acute Toxicity - Inhalation: Category 4 SE3NARC STOT Single Exposure Category 3 (narcotic) SC2 Skin Corrosion/Irritation: Category 2 FL4 Flammable Liquids: Category 4 AC2 Hazardous to the Aquatic Environment - Long-Term Hazard: Category 2
Signal Word (s)	DANGER
Hazard Statement (s)	H351 Suspected of causing cancer. H318 Causes serious eye damage. H302 Harmful if swallowed. H332 Harmful if inhaled. H336 May cause drowsiness or dizziness. H315 Causes skin irritation. AUH066 Repeated exposure may cause skin dryness or cracking H227 Combustible liquid H400 Very toxic to aquatic life.
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)	Corrosion, Exclamation mark, Health hazard, Environment, The below pictograms are GHS Hazard symbols for workplace use only. See SECTION 14 for Dangerous Goods information.



Precautionary statement – Prevention

P264 Wash hands and exposed skin thoroughly after handling.
P270 Do not eat, drink or smoke when using this product.
P261 Avoid breathing spray.
P271 Use only outdoors or in a well-ventilated area.

Precautionary statement – Response

P280 Wear protective gloves, clothing, eye and face protection.
P301+P312 IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell.
P330 Rinse mouth.
P304+P340 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.

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P312 Call a POISON CENTER or doctor/physician if you feel unwell.
 P302+P352 IF ON SKIN: Wash with plenty of soap and water.
 P332+P313 If skin irritation occurs: Get medical advice/attention.
 P362 Take off contaminated clothing and wash before reuse.
 P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
 P337+P313 If eye irritation persists: Get medical advice/attention.
 P308+P313 IF exposed or concerned: Get medical advice/attention.
 Poisons Schedule S6

Other Information

3. Composition/information on ingredients

Chemical Liquid

Characterization

Ingredients

<u>Name</u>	<u>CAS</u>	<u>Proportion</u>
Clomazone	81777-89-1	480 g/L
Liquid Hydrocarbon	64742-94-5	400-450 g/L
Other ingredients (considered non-hazardous)		0-10 %

4. First-aid measures

Inhalation Remove affected person to fresh air until recovered. If symptoms develop or persist, seek medical advice.

Ingestion If poisoning occurs, contact a doctor or the Poisons Information Centre (Australia) on 13 11 26.
 If swallowed DO NOT induce vomiting.
 Give a glass of water.

Skin Any skin contaminated with the concentrate must be thoroughly washed with soap and water.
 Remove contaminated clothing and launder before re-use.
 If irritation persists, seek medical advice.

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.

Advice to Doctor Treat symptomatically.
 If vomiting occurs, solvent present may cause pulmonary pneumonitis.

5. Fire-fighting measures

Suitable extinguishing media Water fog, foam, carbon dioxide or dry chemical.

Hazards from Combustion May emit toxic smoke and fumes if involved in fires or exposed to extreme heat.

Products

Special Protective Equipment for fire fighters Breathable air apparatus may have to be worn if material is involved in fires especially in confined spaces.

Precautions in connection with Fire If exposed to fire: keep container cool by spraying with water fog.

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.

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

Clean-up Methods - Large Spillages Place damaged containers in recovery bins (if available) and return to manufacturer.
 If large liquid spills occur, attempt to recover as much spilt material from sumps and banded areas, as possible, before absorbing remaining material into

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vermiculite or other absorbent. To clean spill area, tools and equipment, wash with a solution of detergent, vinegar (acetic acid) and water. Follow by washing again with a bleach or soda ash solution and finish by washing a third time with a strong detergent solution. Absorb any collected washings as above.

Environmental Precautions This product is a herbicide and spills can damage crops, pastures and desirable vegetation.
It is safer to use near plants susceptible to phenoxy type herbicides.
Use earthen bunds or absorbent bunding to prevent spreading of spillage.

7. Handling and storage

Precautions for Safe Handling Do NOT contaminate dams, rivers or streams, or any other water bodies with chemical or used containers.
Do not allow drift to occur outside the target area. Observe precautions on label to minimise product volatilisation and potential off-target effects.

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.
Keep container tightly sealed and do not store with seed, fertilisers or foodstuffs.

Other Information Always read the label and any attached leaflet before use.

8. Exposure controls/personal protection

Occupational exposure limit values The manufacturer of the solvent has recommended an occupational exposure limit of 100 mg/m³; 17ppm TWA, as total hydrocarbon.
No exposure standards have been set for this product.

Appropriate engineering controls Handle in well ventilated areas, generally natural ventilation is adequate.

Personal Protective Equipment When opening the container, preparing product for use and using the prepared product, wear cotton overalls buttoned to the neck and wrist (or equivalent clothing), a washable hat, elbow-length PVC gloves and goggles.

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.

Requirements Concerning Special Training 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.

9. Physical and chemical properties

Form Liquid

Appearance Brown coloured liquid.

Solubility in Water Forms an emulsion in water.

Specific Gravity 1.028

pH 6.5 - 7.5

Vapour Pressure 19.2 mPa @ 25°C for clomazone

Flash Point 74°C

Flammability Combustible Liquid (GHS). Combustible liquid C1. (does not sustain combustion) AS1940.

10. Stability and reactivity

Chemical Stability Stable under normal conditions.

Conditions to Avoid Excessive heat and fire.

Hazardous Polymerization Hazardous polymerisation is not possible.

11. Toxicological Information

Acute Toxicity - Oral LD50 (rat) 1369 mg/kg for clomazone

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Acute Toxicity - Dermal	LD50 (rat) >2000mg/kg
Acute Toxicity - Inhalation	LC50 (rat) (4hr) 4.85 mg/l
Ingestion	Possible symptoms of exposure of the concentrate include: headaches, nausea, dizziness and tracheal burning. If aspirated into the lung, e.g. from vomiting, the presence of solvent may result in chemical pneumonitis or pulmonary oedema.
Inhalation	May cause irritation to the respiratory tract.
Skin	Prolonged contact with the concentrate can cause defatting of the skin and may result in dermatitis.
Eye	The concentrate may cause severe irritation of the eyes unless washed off immediately.
Skin Sensitisation	Prolonged and repeated skin contact may result in skin sensitisation. Skin contact may produce skin sensations such as numbing, burning and tingling. These sensations are reversible and usually subside within 24 hours.
Carcinogenicity	An impurity present in the solvent has been found to cause tumors in laboratory studies. The active ingredient(s), clomazone is not considered carcinogenic.
Chronic Effects	Based on available data, repeated exposures are not anticipated to cause additional significant adverse effects.
Serious eye damage/irritation	Risk of serious damage to eyes.
Skin corrosion/irritation	The product is a skin irritant.
Other Information	Product is not a skin sensitiser. The Australian Acceptable Daily Intake (ADI) for clomazone for a human is 0.1 mg/kg/day, set for the public for daily, lifetime exposure. This is based on the NOEL of 14 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 Health, Office of Chemical Safety, 'ADI List', March 2016).

12. Ecological information

Persistence and degradability	Half life in soil is typically 83 days.
Known Harmful Effects on the Environment	The product is a marine pollutant for sea transport.
Other Precautions	Do not contaminate streams, rivers or waterways with the chemical or used containers.
Environmental Protection	Spray drift should be avoided, read the label for more information.
Acute Toxicity - Fish	The following is data for the active ingredient, clomazone. LC50 (96hr) for rainbow trout is 15.5 mg/l.
Acute Toxicity - Daphnia	EC50 (48hr) for daphnia magna is 12.7 mg/l.
Acute Toxicity - Algae	ECr50 (72hr) for algae is 0.136 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, break, crush or puncture and deliver empty packaging for appropriate disposal at an approved waste management facility. If an approved waste management facility is not available, bury the empty

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packaging 500mm below the surface in a disposal pit specifically marked and set up for this purpose clear of waterways, desirable vegetation and tree roots, in compliance with relevant local, state or territory government regulations.

DO NOT burn empty containers or product. drumMUSTER is the national program for the collection and recycling of empty, cleaned, non returnable crop production and on-farm animal health chemical containers. If the label on your container carries the drumMUSTER symbol, triple rinse the container, ring your local Council, and offer the container for collection in the program.

Returnable containers: empty contents fully into application equipment. Replace cap, close all valves and return to the point of supply for refill or storage.

14. Transport information

Transport Information Storage and Transport	It is good practice not to transport agricultural chemical products with food, food related materials and animal feedstuffs. 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.
UN Number (Sea Transport)	For bulk shipments as Class 9, use UN 3082, HazChem code 2Z. 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 clomazone)

15. Regulatory information

Regulatory Information	WHS Schedule 11: item 10 - Flammable Liquid category 4 .
Poisons Schedule	S6
Packaging & Labelling	POISON 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: 67712.

16. Other Information

Date of preparation or last revision of SDS	21/06/2017
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 and product has been rebranded. ...End Of MSDS...

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