


Safety Data Sheet


BerryMAX L 7754 (Act 36 of 1947) Namibian Reg. No. N-AR 1685

1) PRODUCT AND COMPANY IDENTIFICATION	
Product name:	BERRYMAX
Other means of identification:	Forchlorfenuron 10 g/L SL
Chemical Name:	N-(2-chloro-4-pyridinyl)-N'-phenylurea
Recommended Use:	Plant growth regulator
Restrictions on use:	Agriculture
UN No:	1170
Distributed by:	MERIDIAN AGRITECH P O BOX 436 MODDERFONTEIN TEL 011 8228509 FAX 0866901386 MOBILE: 0834006056 www.agritech.co.za
Emergency Number:	POISON CENTRE (UNITAS HOSPITAL) 012 664 1100 TYGERBERG: 021 931 6129 RED CROSS: 021 689 5227 RAPID SPILL RESPONSE 0800 775 3305 GRIFFON POISON CENTRE: 082 446 8946
2) HAZARDS IDENTIFICATION:	
Classification of the substance / mixture:	GHS: Oral Category: 5 Dermal Category: 5 Aquatic Chronic Category 2 Carcinogenicity Category 2
Label Elements: Globally Harmonized System, EU (GHS):	<p>Pictograms:</p>  <p>Signal word: Warning</p> <p>Hazard Statements: H225: Highly flammable liquid and vapour. H351: Suspected of causing cancer. H411: Toxic to aquatic life with long-lasting effects.</p> <p>Precautionary Statements: P210: Keep away from heat, hot surfaces, sparks, open flames, and other ignition sources. No smoking. P270: Do not eat, drink or smoke when using this product. P273: Avoid release to the environment.</p> <p>Hazard symbols: N: Dangerous for the environment F: Flammable</p> <p>R-phrases(s): R11: Highly Flammable</p>
According to Directive 67/548/EEC No. 1272/2008 [CLP]	

					<p>R40: Limited evidence of a carcinogenic effect.</p> <p>R51/53: Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.</p> <p>S-phrase(s):</p> <p>S2: Keep out of reach of children.</p> <p>S7: Keep container tightly closed.</p> <p>S13: Keep away from food, drink and animal feeding stuffs.</p> <p>S16: Keep away from sources of ignition. No smoking.</p> <p>S22: Do not breathe vapour.</p> <p>S24: Avoid contact with the skin.</p> <p>S36/37: Wear suitable protective clothing and gloves.</p> <p>S46: If swallowed, seek medical advice immediately and show this label.</p>
3) COMPOSITION / INFORMATION ON INGREDIENTS:					
3.1 Substances: Not applicable					
3.2 Mixtures:					
Chemical Name	Concentration	CAS No.	EC No.	Classification according to Regulation EC 1272/2008 (CLP)	
Forchlorfenuron	10 g/L	68157-60-8	614-346-0	Carcinogenicity 2 (H351, oral) Aquatic Chronic 2 (H411)	
Ethanol	47%	64-17-5	200-578-6	Flammable liquid (H225)	
4) FIRST AID MEASURES:					
Inhalation:			Unlikely to cause harmful effects under normal conditions and use. Remove patient to fresh air and loosen clothing around the neck. Lie down and keep warm and rested. If breathing is shallow or has stopped ensure airway is clear and apply provide artificial respiration. Seek medical assistance immediately following significant exposure.		
Skin contact:			Immediately flush body and clothes with large amounts of water. Remove contaminated clothing and footwear. Wash affected areas with soap and water. Do not rub skin. Persons providing first aid must wear gloves to avoid self-contamination. If the patient feels unwell or symptoms of skin irritation appear, seek medical assistance.		
Eye contact:			Flush eyes with plenty of water for 15 minutes holding eyelids open if necessary. Seek medical assistance if irritation persists.		
Ingestion:			In case of accidental swallowing, if patient is conscious, rinse mouth, give one or two glasses of water or milk to drink - and do not induce vomiting without medical advice. Get medical attention immediately. Never give anything by mouth to an unconscious person. For advice, contact the National Poisons Centre.		
Most important symptoms and effects, both acute and delayed:			Effects on the CNS are possible after inhalation.		
Indication of any immediate medical attention and special treatment needed:			No specific antidote for this product. If necessary, administer activated charcoal (10 – 20 gram) and sodium sulphate (20 gram). Persons providing first aid must wear gloves to avoid self-contamination. Symptomatic treatment and supportive therapy as indicated.		
5) FIRE-FIGHTING MEASURES:					
Extinguishing Media:			Use alcohol-resistant foam, carbon dioxide, dry powder or water. For large fires, use alcohol-resistant foam or water-fog.		
Unsuitable Extinguishing Media:			Do not use high volume water jet, due to contamination risk.		
Specific Hazards arising from the substance/mixture:			Generation of poisonous and corrosive fumes: Carbon oxides, nitrous gases and hydrogen chloride. Flammable, keep away from sources of ignition.		

<p>Fire Fighting:</p>	<p>Remove spectators from surrounding area. Isolate the fire area and evacuate downwind. Use a recommended extinguishing agent for the type of surrounding fire. Fight fire from maximum distance and use unmanned hose holder or monitor nozzles. Water can be used for cooling of unaffected stock but avoid accumulation of polluted run-off from the site. Contain fire control water for later disposal. Do not scatter the material. Avoid pollution of waterways. If conditions permit, let fire burn itself out, in the case that the area is heavily exposed to fire. Avoid inhaling hazardous vapours and fumes from burning materials. Keep upwind. Remove container from fire area if possible and without risk. Dike fire control water for later disposal</p>
<p>Protective clothing:</p>	<p>Full protective clothing and self-contained breathing apparatus.</p>
<p>6) ACCIDENTAL RELEASE MEASURES:</p>	
<p>Personal precautions, protective equipment and emergency procedures:</p>	<p>Avoid contact with skin and eyes. Do not breathe in spray or fumes. Keep away from sources of ignition. For personal protection see Section 8.</p>
<p>Environmental Precautions:</p>	<p>Do not contaminate waterways, drains and groundwater. If contamination of waterways, drains, rivers or lakes is unavoidable, warn the local authorities (Police and Department of Water/Environmental affairs) immediately.</p>
<p>Occupational spill:</p>	<p>Wear protective clothing according to operator safety during removal of spillage. Clear area of unprotected personnel. Prevent product from spreading and collect into specially marked, tightly closing containers. Treat contaminated areas with water containing soda or detergent. Dike spill area and collect washings to avoid any contamination of surface and ground water, water supplies and drains. Heavily contaminated soil layers should be removed and disposed of in an approved way. Rinse the spill area and any tools or implements several times with soapy water. Contain and absorb the rinsate with inert absorbents and place into the same disposal container as the spill material. Notify regulatory authorities if necessary. Spilled product cannot be re-used and must be disposed of by incineration or disposal in a chemical waste disposal facility. If containers cannot be recycled, they should be disposed of together with the waste chemical.</p>
<p>7) HANDLING & STORAGE:</p>	
<p>Precautions for Safe Handling:</p>	<p>Avoid skin and eye contact and inhalation of spray mist. Keep away from sources of ignition. Do not contaminate water, food or feed by storage or disposal. Work must be conducted in a well-ventilated area. Do not eat, drink or smoke whilst using or mixing the product. Wash thoroughly with soap and water after handling.</p>
<p>Conditions for Safe Storage, including any incompatibilities:</p>	<p>Store in original container tightly closed and in a locked, dry, cool, well-ventilated separate agrochemical storage facility away from foodstuffs, fertilisers, and seeds. Store away from direct sunlight. Keep out of reach of children and away from uninformed persons.</p>
<p>8) EXPOSURE CONTROL / PERSONAL PROTECTION:</p>	
<p>Appropriate Engineering Controls:</p>	<p>It is essential to provide adequate ventilation. The measures appropriate for a particular work site depend on how this material is used and on the extent of exposure. Ensure that control systems are properly designed and maintained. Comply with occupational safety, environmental, fire, and other applicable regulations.</p>
<p>Control Parameters: Occupational Exposure Limits:</p>	<p>No data available</p>

PERSONAL PROTECTIVE EQUIPMENT:	
Clothing:	Employee must wear appropriate protective (impervious) clothing and equipment to prevent repeated or prolonged skin contact with this substance. Wash hands thoroughly with soap and water after handling. Contaminated clothing must be washed before re-use.
Gloves:	Employee must wear appropriate chemical-resistant gloves to prevent contact with this substance
Eye protection:	The use of safety goggles is recommended.
Emergency eye wash:	Where there is any possibility that an employee's eyes may be exposed to this substance, the employer should provide an eye wash fountain or appropriate alternative within the immediate work area for emergency use.
9) PHYSICAL & CHEMICAL PROPERTIES:	
Form:	Liquid
Colour:	Reddish brown
Odour:	Characteristic
Solubility:	Miscible in water
pH:	7.8
Odour threshold:	Not available
Melting point / Freezing point	165 – 170 (Forchlorfenuron)
Initial boiling point and boiling range	Not available
Flash point:	25°C
Evaporation rate:	Not available
Flammability (solid, gas)	Not available
Upper/ lower flammability or explosive limits:	Not available
Vapour pressure:	4.6 x 10 ⁻⁵ mPa (Forchlorfenuron)
Vapour density:	Not available
Relative density:	Not available
Partition coefficient: n-octanol/water	Log K _{ow} 3.2 (Forchlorfenuron)
Auto-ignition temperature:	Not available
Viscosity:	Not available
10) STABILITY & REACTIVITY:	
Reactivity:	No hazardous reactions if stored and handled as indicated.
Chemical Stability:	When stored appropriately this product should show no significant degradation for 2 years from the date of manufacture.
Possibility of hazardous reactions:	Not available
Conditions to avoid:	Avoid heat and sources of ignition. Keep away from direct sunlight
Incompatible materials:	Not available
Hazardous decomposition product(s):	Heating can release vapours which can be ignited. Generation of poisonous and corrosive fumes: Carbon oxides, nitrous gases and hydrogen chloride.
11) TOXICOLOGICAL INFORMATION:	
Acute Toxicity:	
Oral:	LD50 > 2500 mg/kg (male rat); > 1500 mg/kg (female rat).
Dermal:	LD50 > 2000 mg/kg (rabbit).
Inhalation:	LD50 > 10 000 ppm (rats, 4h)
Skin Corrosion/Irritation:	Not an irritant.
Serious Eye Damage/Irritation:	Not an irritant.
Respiratory or Skin Sensitization:	Not a sensitizer.
Germ Cell Mutagenicity:	No data available
Carcinogenicity:	Suspected of causing cancer.
Reproductive Toxicity:	No data available
STOT-SE:	No data available
STOT-RE:	No data available
Aspiration Hazard:	No data available
12) ECOLOGICAL INFORMATION:	
Ecotoxicity:	
Birds:	LD50 (Oral) Bobwhite quail 2200 mg/kg. Dietary LC50 (8d) Bobwhite quail >5500 mg/kg diet.

Fish: Daphnia: Algae: Worms: Bees: Other:	LC50 (96h) Rainbow trout > 9mg/L, Carp >8 mg/L. LC50 (48 h) > 8 mg/L. E ₅₀ (72h) Pseudokirchneriella subcapitata 3.3 mg/L. LC50 > 1000 mg/kg (Earthworms). LD50 (contact) > 25 µg/bee. Not available.
Persistence and Degradability:	According to the results of tests of biodegradability this product is readily biodegradable.
Bio accumulative Potential:	No data available.
Mobility in Soil:	Moderately mobile to essentially immobile in soils, K_{oc} 852–3320 (mean 1763, 4 soils).
13) DISPOSAL CONSIDERATIONS:	
Waste Disposal:	Do not contaminate water, food or feed by disposal. Wastes resulting from the use of this product may be disposed of on site or at an approved waste disposal facility. Spilled product cannot be re-used and must be disposed of by incineration or disposal in a chemical waste disposal facility.
Container Disposal:	Refer to the product label for instructions. Container Refilling and Disposal: If the container is to be refilled, do not rinse with any material or introduce any pesticide other than this product. DO NO REUSE THE CONTAINER FOR ANY OTHER PURPOSE. Do not transport if this container is damaged or leaking. If containers cannot be recycled, they should be disposed of together with the waste chemical.
14) TRANSPORTATION INFORMATION:	
Road Transport ADR / IRD:	UN NUMBER: 1170 UN Proper Shipping name: N.O.S. Ethanol solution Transport Hazard Class: 3 Flammable and combustible liquids. Packaging group: III Labelling no: 3 Environmental Hazards: Not applicable Special Precautions for User: Read safety instructions, SDS and emergency procedures before handling.
Maritime Transport IMDG / IMO:	UN NUMBER: 1170 UN Proper Shipping name: N.O.S. Ethanol solution Transport Hazard Class: 3 Flammable and combustible liquids. Packaging group: III Labelling no: 3 Environmental Hazards: Toxic to aquatic life with long-lasting effects. Special Precautions for User: Read safety instructions, SDS and emergency procedures before handling. 
Air Transport ICAO / IATA:	Not applicable
Transport in Bulk (according to Annex II of MARPOL 73/78 and the IBC Code):	Not applicable
15) REGULATORY INFORMATION:	
Safety, health and environmental regulations/legislation specific for the substance/mixture:	For the user of this plant-protective product applies: 'To avoid risks to man and the environment, comply with the instructions for use.' (Directive 1999/45/EC, Article 10, No. 1.2)
Chemical Safety Assessment:	Advice on product handling can be found in sections 7 and 8 of this safety data sheet.
16) OTHER INFORMATION:	
<p>All information and instructions provided in this Safety Data Sheet (SDS) are based on the current state of scientific and technical knowledge at the date indicated on the present SDS and are presented in good faith and believed to be correct. This information applies to the product as such. In case of new formulations or mixes, it is necessary to ascertain that a new danger will not appear.</p> <p>It is the responsibility of persons in receipt of this SDS to ensure that the information contained herein is properly read and understood by all people who may use, handle, dispose of or in any way come in contact with this product. If the recipient subsequently produces formulation(s) containing this product, it is the recipient's sole responsibility to ensure that the transfer of all relevant information from this SDS to their own SDS.</p>	

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Abbreviations and acronyms:

1. CAS number: Chemical Abstracts Service number.
2. CLP: Classification, Labelling, Packaging.
3. LD₅₀: Lethal Dose for 50% of the test population.
4. LC₅₀: Lethal Concentration for 50% of the test population.
5. DT₅₀: Half-life.
6. GHS: Globally Harmonised System (of Classification and Labelling of Chemicals).
7. STOT: Specific Target Organ Toxicity
8. SE: Single exposure
9. RE: Repeated exposure

Literature References:

- GHS: www.ccohs.ca/oshanswers/chemicals/ghs.html
- ECHA: <https://echa.europa.eu/search-chemicals>