


## Safety Data Sheet

### DIURON 80WG- Reg. No: L 9653 (Act No 36 of 1947)

Date of issue: 28/04/2015

1) IDENTIFICATION OF THE SUBSTANCE OR MIXTURE AND OF THE SUPPLIER.	
Product name:	DIURON 80WG
Other means of identification:	DIURON 800 g/kg WG
UN number:	3077
Recommended use:	Herbicide
Restrictions on use:	Agriculture
Distributed by:	MERIDIAN AGRITECH P O BOX 436 MODDERFONTEIN TEL 011 8228509 FAX 0866901386 MOBILE: 0834006056 <a href="http://www.agritech.co.za">www.agritech.co.za</a>
Emergency Number:	POISON CENTRE (UNITAS HOSPITAL): 012 664 1100 WESTERN CAPE POISONS TELEPHONE SERVICE: 0861 555 777 RAPID SPILL RESPONSE: 0800 775 3305 GRIFFON POISON CENTRE: 082 446 8946
Chemical Name:	3-(3,4-dichlorophenyl)-1,1-dimethylurea
2) Classification of the substance / mixture:	
Classification of the product:	Acute tox,4: H302 STOT RE,2 :H373 Aquatic acute,1: h400 Aquatic chronic ,1:h410 Car,2:(H351) Full text of R-phrases; see section 15.
Label elements:	<b>Hazard statement:</b> H303: ay be harmful if swallowed H351: suspected of causing cancer H373-may cause damage to organs through prolonged or repeated exposure <b>Precautionary statements:</b> P102- Keep out of reach of children P201: Obtain special instructions before use

	<p>P260: Do not breathe dust/ fume/gas/ mist/vapours/spray.</p> <p>P280: wear protective gloves/ protectiveclothing/ eye protection/ face protection</p> <p>P501: Dispose of contents/ containers to an approved waste disposal plant/</p> <p><b>Pictogram:</b></p>  <p>Signal Word: <b>WARNING</b></p>
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<b>Health effects: eyes:</b>	May cause mild irritation.
<b>Health effects: skin:</b>	May cause moderate irritation and may cause sensitization in some individuals.
<b>Health effects: ingestion</b>	Harmful if swallowed. Some signs of central nervous system depression have been noted at high levels of diuron exposure. For humans, the only reported case of acute, oral exposure to the herbicide produced no significant symptoms or toxicity
<b>Health effects: inhalation</b>	Minimally toxic. Harmful if inhaled. May cause irritation of the nose and throat.
<b>Health effects: Other</b>	

### 3) COMPOSITION / INFORMATION ON INGREDIENTS:

Mixture:

Chemical name	Composition	CAS No.	EC No.	Classification according to Regulation EC 1272/2008 (CLP)	Classification according to 67/548/EEC
Diuron	80 %	330-54-1	206-345-4	Acute tox,4: H302 STOT RE,2 :H373 Aquatic acute,1: h400 Aquatic chronic ,1:h410 Car,2:(H351)	

Full text of R- and S-phrases: see section 15.

### 4) First Aid Measures:

<b>Eye contact:</b>	Flush eyes with plenty of water for 15 minutes holding eyelids open if necessary. Obtain medical attention if irritation persists.
<b>Skin contact:</b>	Thoroughly wash body with large amounts of water and soap. Remove contaminated clothing and footwear. Wash affected areas with soap and water. Persons providing first aid must wear gloves to avoid self-contamination.  Seek medical assistance should irritation persist. Wash

<p><b>Ingestion:</b></p> <p><b>Inhalation:</b></p> <p><b>Most important symptoms and effects, acute and delayed:</b></p> <p><b>Indication of immediate medical attention and special treatment needed: Advice to physician</b></p>	<p>contaminated clothing before re-use</p> <p>Never give anything by mouth to an unconscious person. If swallowed do NOT induce vomiting. One or two glasses of water may be given. For advice, contact the National Poisons Centre.</p> <p>Seek medical assistance immediately.</p> <p>Remove patient to fresh air. Lie down and keep warm and rested. If breathing is shallow or has stopped ensure airway is clear and apply resuscitation.</p> <p>Seek medical assistance.</p> <p>None known</p> <p>No specific antidote is known. Treat symptomatically and supportively as and when needed. Gastric lavage and catharsis could be considered when large quantities of the product has been ingested. Give oxygen if the respiration is depressed. Methemoglobinemia may be noted. If the patient is symptomatic and cyanotic, or the methemoglobin level is greater than 30% in an asymptomatic patient, administer 1 – 2 mg/kg of 1% methylene blue slowly IV.</p>
<p><b>5) Fire-Fighting Measures:</b></p>	
<p><b>Suitable extinguishing media:</b></p> <p><b>Unsuitable extinguishing media:</b></p> <p><b>Special hazards arising from the substance or mixture:</b></p>	<p>Carbon dioxide, dry chemical powder.</p> <p>Water spray may be used to cool unaffected stock, but avoid water coming into contact with the product. Use as little water as possible. Use a spray or fog as a solid stream may result in spreading.</p> <p>UNUSUAL FIRE OR EXPLOSION HAZARDS:</p> <p>Cool sealed drums with water to prevent rupture due to thermal expansion.</p>
<p><b>Fire-fighting:</b></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.</p> <p>Fight fire from maximum distance and use unmanned hose holder or monitor nozzles. If area is heavily exposed to fire and if conditions permit, let fire burn itself out. Contain fire control agents for later disposal.</p> <p>Avoid inhaling hazardous vapours and fumes from burning materials. Keep upwind. Remove container from fire area if possible and without risk. Water can be used to cool unaffected containers but must be contained for later disposal. Do not scatter the material. Avoid pollution of waterways.</p> <p>May generate poisonous and corrosive vapours of carbon oxides, nitrogen oxides and corrosive fumes of chloride, toxic mists or other products of combustion.</p>
<p><b>Protective clothing:</b></p>	<p>Full protective clothing and self-contained breathing apparatus. .When fighting a major fire wear an air-supplied respirator.</p>
<p><b>6) Accidental Release Measures:</b></p>	

<p><b>Personal precautions:</b></p> <p><b>Environmental precautions:</b></p> <p><b>Cleaning procedure:</b></p> <p><b>Disposal:</b></p>	<p>Avoid contact with skin and eyes. Do not breathe in the spray or fumes. For personal protection see section 8.</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>Wear protective clothing. Clear area of unprotected personnel. Contain and absorb liquid spills with inert material and place in waste containers. Wash area with water containing soda or detergent and absorb with further inert material. If spill does enter waterways contact the local authority. Heavily contaminated soil layers should be removed and disposed of in an approved way. 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><b>Waste Disposal:</b></p> <p>In accordance with local and national regulations. Must be incinerated in a suitable incineration plant holding a permit delivered by the competent authorities. 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.</p> <p><b>Container Disposal:</b></p> <p>Refer to the product label for instructions.</p> <p>If the container is to be refilled, do not rinse with any material or introduce any pesticide other than this product.</p> <p><b>DO NO REUSE THE CONTAINER FOR ANY OTHER PURPOSE.</b></p> <p>Do not transport if this container is damaged or leaking.</p>
<p><b>7) Handling &amp; Storage:</b></p>	
<p><b>Handling:</b></p> <p><b>Storage:</b></p>	<p>Avoid skin and eye contact and inhalation of spray mist. Keep away from heat and sources of ignition. Ensure adequate ventilation.</p> <p>Wash hands before breaks and immediately after handling the product. When using, do not eat, drink or smoke. Wash contaminated clothing before re-use.</p> <p>APPROVED HANDLER: This product must be under the control of an approved handler when applied in a wide dispersive manner; or used by a commercial contractor. BEWARE: Spray drift hazard. Apply this product carefully. Spray drift may cause serious damage to other desirable plants.</p> <p>Store in the original, labelled container tightly closed and in a locked, dry, cool, shaded, well-ventilated area away from heat, spark and other sources of ignition. Do not store with other pesticides, foodstuffs, fertilisers, seeds, water supplies and incompatible substances.</p> <p>Keep away from children , unauthorised persons and animals.</p> <p>Store at temperatures below 50 °C and above 0°C Store in accordance with local regulations.</p>
<p><b>8) Exposure Control / Personal Protection:</b></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><b><u>PERSONAL PROTECTIVE EQUIPMENT:</u></b></p> <p><b>Clothing:</b></p> <p><b>Gloves:</b></p> <p><b>Eye protection:</b></p> <p><b>Respiratory protection:</b></p> <p><b>Emergency eye wash:</b></p>	<p>Employee must wear appropriate protective (impervious) clothing and equipment to prevent repeated or prolonged skin contact with this substance.</p> <p>Employee must wear appropriate chemical-resistant gloves to prevent contact with this substance</p> <p>The use of safety goggles with side shields is recommended.</p> <p>Wear respirator if ventilation is inadequate or exposure to high levels are likely</p> <p>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.</p>
<p><b>9) Physical &amp; Chemical Properties:</b></p>	
<p><b>Form:</b></p> <p><b>Colour:</b></p> <p><b>Odour:</b></p> <p><b>Odour threshold:</b></p> <p><b>Density:</b></p> <p><b>pH:</b></p> <p><b>Melting point / Freezing point</b></p> <p><b>Initial boiling point and boiling range</b></p> <p><b>Flash point:</b></p> <p><b>Evaporation rate:</b></p> <p><b>Flammability (solid, gas)</b></p> <p><b>Upper/ lower flammability or explosive limits:</b></p> <p><b>Vapour pressure:</b></p> <p><b>Vapour density:</b></p> <p><b>Relative density:</b></p> <p><b>Solubility(ies)</b></p> <p><b>Partition coefficient: n-octanol/water</b></p> <p><b>Auto-ignition temperature:</b></p> <p><b>Viscosity:</b></p>	<p>Granules</p> <p>White</p> <p>Characteristic</p> <p>No data available</p> <p>No data available</p> <p>9.9</p> <p>No data available</p> <p>Not flammable</p> <p>No data available</p> <p>Not flammable</p> <p>No data available</p> <p>No data available</p> <p>No data available</p> <p>No data available</p> <p>No data available</p> <p>Dispersible in water.</p> <p>No data available</p> <p>No data available</p> <p>No data available</p>
<p><b>10) Stability &amp; Reactivity:</b></p>	
<p><b>Reactivity:</b></p> <p><b>Chemical stability:</b></p> <p><b>Hazardous decomposition product(s):</b></p>	<p>When stored appropriately this product should show no significant degradation for 2 years from the date of manufacture Stable in neutral media, hydrolyzed by acids and alkalis and at elevated temperatures Avoid strong acids and alkalis</p> <p>When heated to decomposition: Toxic oxides of carbon,</p>

**Conditions to avoid:**

nitrogen and corrosive fumes of chloride are released.  
Decomposes at 180 – 190 ° C

**Incompatible materials:**

**11) Toxicological Information:**

Acute:

Oral LD<sub>50</sub> >2 500 mg/kg, rat

Dermal LD<sub>50</sub> > 5 000 mg/kg, rats

Inhalation LC<sub>50</sub> (4h): > 1.07 mg/L air, rat.

Skin irritation : Mild irritant, rabbit.

Eye irritation : Mild irritant, rabbit.

Sensitisation : Does not cause sensitization by skin contact, guinea pig.

Other : It is unlikely that diuron will cause any reproductive effects in humans at the expected levels of exposure.

**Repeated dose toxicity**

**Mutagenicity:** Not mutagenic

**Carcinogenicity:** Not carcinogenic

**Teratogenicity:** Diuron is teratogenic at very high dosages.

**12) Ecological Information:**

**Information below based on active ingredient:**

**Bees:** LC<sub>50</sub> (oral & contact): > 145 mg/kg/bee. Not toxic to bees.

**Birds:** LD<sub>50</sub>: for bobwhite quail 1104 mg/kg. Dietary LC<sub>50</sub> (8 d) for bobwhite quail: 1730 mg/kg, Japanese quail >5000 mg/kg, mallard ducks: 5000 mg/kg, pheasants >5000 ppm diet. Slightly toxic

**Fish:** LC<sub>50</sub> (96hrs) for Rainbow trout 14.7, sheepshead minnows 6.7, fathead minnows 14 mg/L. Daphnia : EC<sub>50</sub> (48 h) 1.4 mg/L. Moderately toxic to fish

**Algae:** LC<sub>50</sub> (14 d) >400 mg/kg (based on studies with diuron metabolites).

**Worms:**

**Other aquatic species:**

**Persistence:** Diuron is moderately to highly persistent in soil. The residue half-lives are from 1 month to 1 year. However, some pineapple fields have been known to contain residues 3 years after the last application. The mobility in the soil is related to the organic matter content and the type of residue. The metabolites are less mobile than the parent compound itself.

Diuron is relatively stable in neutral water. Microbes are the main degradative agents of diuron in aquatic environments.

Diuron is readily absorbed through the root system of plants and less readily so through the leaves and stems

**13) Disposal Considerations:**

**Waste Disposal:** In accordance with local and national regulations. Must be incinerated in a suitable incineration plant holding a permit delivered by the competent authorities. 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.

**Container Disposal:** Refer to the product label for instructions. Triple rinse empty containers before disposal in the following manner: Invert the container over the spray or mixing tank and allow to drain for at least 30 seconds after the flow has slowed to a drip. Thereafter, rinse the container three times with a volume of water equal to a third of that of the container volume. Add rinsing to the contents of the spray tank before destroying the container in the prescribed manner. Empty containers should not be burnt; puncture and flatten containers and dispose at a licensed landfill site according to local regulations. If no landfill is available, bury the containers below 500 mm in a disposal pit specifically marked and set up for this purpose clear of waterways, desirable vegetation and tree roots. Prevent contamination of water sources, food or feed by disposal. DO NOT REUSE THE CONTAINER FOR ANY OTHER PURPOSE. If recycling, replace cap and take containers to the designated recycling point. If containers cannot be recycled, they should be disposed of together with the

waste chemical according to local regulations.

#### 14) Transportation Information:

UN NUMBER: 3077

Road Transport ADR/ RID:

Class: 9, Miscellaneous Dangerous Goods

Packaging group: III

Shipping name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (DIURON)

Maritime Transport IMDG / IMO:

Marine Pollutant: Yes

Class: 9, Miscellaneous Dangerous Goods

Packaging group: III

Shipping name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (DIURON)

Air Transport ICAO/IATA:

Class: 9, Miscellaneous Dangerous Goods

Packing group: III

Shipping name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (DIURON)

#### 15) Regulatory Information:

**Labelling according to EC directives:**

**Hazardous components which must be listed on the label: DIURON**

**Symbols:** Xn – Harmful.

N - Dangerous for the environment

**Risk – Phrase (s):**

R 20/22 -Harmful by inhalation and if swallowed

R 36/37/38 - Irritating to eyes, respiratory system and skin.

R 40 - Limited evidence of a carcinogenic effect.

R 43 - May cause sensitization by skin contact

R48 - Danger of serious damage to health by prolonged exposure.

R50/53 - Very toxic to aquatic organisms

**Safety – Phrase (s):**

S 2 - Keep out of the reach of children.

S 7 - Keep the container tightly closed

S 13 - Keep away from food, drink and animal feeding stuffs.

S20/21 - When using, do not eat drink or smoke.

S23 - Do not breathe fumes/vapour/spray. S 24/25 - Avoid contact with skin and eyes.

S 36/37 - Wear suitable protective clothing and gloves.

S38 - In case of insufficient ventilation, wear suitable respiratory equipment.

S46 -If swallowed, seek medical advice immediately and show this container.

S60 - This material and its container must be disposed of as hazardous waste.

S61 - Avoid release to the environment. Refer to special instructions / safety data sheets.

**Hazard Statements**

#### 16. Other Information

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.

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 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 the transfer of all relevant information from this SDS to their own SDS.

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