

Safety Data Sheet

KIRON - Reg. No: L 10695 (Act No 36 of 1947)

Date of issue: 22/07/2019

1) IDENTIFICATION OF THE SUBSTANCE OR MIXTURE AND OF THE SUPPLIER			
Product name:	Kiron		
Other means of identification:	Diafenthiuron 500 g/L SC		
Recommended use:	Crop protection product, insecticide.		
UN number:	3082		
Restrictions on use:	For use as an Agricultural remedy only.		
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 WESTERN CAPE POISONS TELEPHONE SERVICE (OR POISONS HELPLINE): 0861 555 777 RAPID SPILL RESPONSE 0800 775 3305 GRIFFON POISON CENTRE: 082 446 8946		
Chemical Name:	1-tert-butyl-3-(2,6-diisopropyl-4-phenoxyphenyl)thiourea		
2) Classification of the substance / mixture:			
Classification of the product:	According to Directive 67/548/EEC or 1272/2008/EC		
	Acute toxicity (Oral)	Category 4	H302
	Acute toxicity (Inhalation)	Category 3	H331
	Specific target organ toxicity – repeated exposure (Dermal)	Category 2	H373
	Specific target organ toxicity – repeated exposure (Oral)	Category 2	H373
	Acute aquatic toxicity	Category 1	H400
	Chronic aquatic toxicity	Category 1	H410
Full text of R and S-phrases: see section 15.			

T: Toxic
N: Dangerous for the environment
R22: Harmful if swallowed
R23: Toxic by inhalation.
R48/21/22: Harmful: danger of serious damage to health by prolonged exposure in contact with skin and if swallowed.
R50/53: Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Label elements

Labelling: Regulation (EC) No. 1272/2008

Hazard pictograms



Signal word: Danger

Hazard statements:

H302: Harmful if swallowed.
H331: Toxic if inhaled.
H373: May cause damage to organs through prolonged or repeated exposure if swallowed.
H373: May cause damage to organs through prolonged or repeated exposure in contact with skin.
H410: Very toxic to aquatic life with long lasting effects.

Precautionary statements:

P102: Keep out of reach of children.
P270: Do not eat, drink or smoke when using this product.
P261: Avoid breathing dust / fume / gas / mist / vapours / spray.
P271: Use only outdoors or in a well-ventilated area.
P301 + P 312: IF SWALLOWED: Call a POISON CENTER or doctor / physician if you feel unwell.
P304 + P340: IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
P311: Call a POISON CENTER or doctor / physician
P391 Collect spillage.
P501 Dispose of contents/container to an approved waste disposal plant.

Supplemental information:

EUH401: To avoid risks to human health and the environment, comply with the instructions for use.

Other hazards:

No other hazards known.

Labelling according to EU directives:

Hazardous components which must be listed on the label:
Diafenthiuron

Symbol(s):

Xn: Harmful
N: Dangerous for the environment

R-phrases:

R22
R23
R48/21/22
R50/53

S-phrases
 S2
 S13
 S20/21
 S35
 S36/37
 S45
 S57

Additional Labelling: To avoid risks to man and the environment, comply with the instructions for use.

Health effects: eyes:

Not an irritant

Health effects: skin:

Not an irritant

Health effects: ingestion

May be harmful if swallowed

Health effects: inhalation

Toxic by inhalation

Health effects: Other

No data available

3) COMPOSITION / INFORMATION ON INGREDIENTS:

Mixture: Suspension Concentrate (SC)
 Diafenthiuron 500 g/L

Chemical name	% composition	CAS No.	EC No.	Classification (67/548/EEC)	Classification (REGULATION) (EC) No 1272/2008
Diafenthiuron	50	80060-09-9	-	T, N R23 R48/21/22 R50/53	Acute Tox. 3: H331 STOT RE2: H373 Aquatic Acute 1: H400 Aquatic Chronic 1: H410

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

4) First Aid Measures:

Inhalation:

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. **Seek medical assistance immediately.**

Skin contact:

Remove contaminated clothing and footwear. Wash affected areas with soap and water for at least 15 minutes. Do not rub skin. Wash clothing and shoes before re-use. Seek medical assistance if symptoms appear and persist..

Eye contact:

Remove any contact lenses and flush eyes with plenty of clean water or saline solution for at least 15 minutes holding eyelids. Seek medical assistance if symptoms appear and persist.

Ingestion

Never give anything by mouth to an unconscious person. If swallowed do NOT induce vomiting unless directed to by medical personnel For advice, contact the National Poisons Centre. Loosen tight clothing such as a collar, tie, belt or waistband. **Seek medical assistance immediately.**

Most important symptoms and effects, acute and delayed:

None known

No antidote is known. Treat symptomatically and supportively as and when needed.

<p>Indication of immediate medical attention and special treatment needed: Advice to physician</p>	
<p>5) Fire-Fighting Measures:</p>	
<p>Suitable extinguishing Media:</p> <p>Unsuitable extinguishing media:</p> <p>Special hazards arising from the substance or mixture.</p> <p>Fire Fighting:</p> <p>Protective clothing:</p>	<p>Small fires: Water spray, alcohol-resistant foam, dry chemical or carbon dioxide according to the materials involved in the fire.</p> <p>Large fires: Alcohol-resistant foam or water spray</p> <p>Do not use high volume water jet, due to contamination risk.</p> <p>Burning chemicals may produce toxic and irritant vapours.</p> <p>Cool the containing vessels with water in order to prevent pressure build-up, autoignition or explosion. 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. If area is heavily exposed to fire and conditions permit, let fire burn itself out. Contain fire control agents for later disposal. 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>Full protective clothing and self-contained breathing apparatus</p>
<p>6) Accidental Release Measures:</p>	
<p>Personal precautions:</p> <p>Environmental precautions:</p> <p>Cleaning procedure:</p> <p>Disposal:</p>	<p>Avoid contact with skin and eyes. Do not breathe in spray or fumes. Refer to section 8.</p> <p>Prevent further leakage or spillage if safe to do so. Use an appropriate container in order to avoid environmental contamination. Do not flush into the surface water or the sanitary sewer system. Do not allow this material to contaminate the ground water system. If spillages cannot be contained, advise the local authorities. If the product contaminates rivers and lakes or drains, inform the respective authorities.</p> <p>Wear protective clothing. Clear area of unprotected personnel and keep unprotected personnel upwind.</p> <p>Small spillages: Soak up with an inert absorbent material and sweep up or vacuum up and collect the spillage in suitable, labelled containers for safe disposal.</p> <p>Large spillages: Contain the spillage, soak up with a noncombustible absorbent material (e.g. sand, earth, diatomaceous earth, vermiculite etc). Transfer to a suitable, labelled container for later safe disposal according to local / national regulations. Large spills should also be collected mechanically (removed by pumping) for safe disposal. Collect any leaking liquid in sealable (metal / plastic) containers.</p> <p>Do not flush the spilled material into the drains. If spill does enter waterways contact the local authority.</p> <p>Waste Disposal: In accordance with current regulations and, if necessary, after consultation with the site operator and / or with the responsible authority, the product may be taken to a waste disposal site or incineration plant. Do not contaminate ponds, waterways or ditches with any chemical or used container. Do not dispose of waste into the sewer. Where possible, recycling is preferable to disposal or incineration. If recycling is not</p>

Gloves:	are unknown, or under any circumstances where air-purifying respirators may not provide adequate protection. Wear chemical resistant gloves. Gloves should be certified to an appropriate standard. Gloves should have a minimum breakthrough time that is appropriate to the duration of exposure. The breakthrough time of gloves varies according to the thickness, material and manufacturer. Gloves should be discarded and replaced if there is any indication of degradation or chemical breakthrough. Suitable material: Nitrile rubber.
Eye protection:	Eye protection is not usually required. Any site specific eye protection policies must be adhered to.
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.
General protective measures:	The use of technical measures should always take preference over the use of personal protective equipment. When selecting personal protective equipment, seek appropriate professional advice. Personal protective equipment should be certified to appropriate standards.

9) Physical & Chemical Properties:

Form:	Liquid, Suspension concentrate
Colour:	Orange
Odour:	Characteristic
Odour threshold	Not determined
pH:	6.0-9.0
Melting point / Freezing point	No data available
Initial boiling point and boiling range	>90 °C
Flash point:	>100 °C at 978.4 hPa DIN EN 22719
Evaporation rate:	No data available
Flammability (solid, gas)	Not highly flammable.
Upper/ lower flammability or explosive limits:	No data available
Vapour pressure:	No data available
Vapour density:	No data available
Relative density:	Approximately 1.01 g/L
Solubility (ies):	Suspends water
Partition coefficient: n-octanol/water	No data available
Auto-ignition temperature:	No data available
Viscosity:	No data available
Oxidative properties	No oxidizing properties

10) Stability & Reactivity:

Reactivity:	No hazardous reactions known. Hazardous polymerisation does not occur. Combustion or thermal decomposition will evolve toxic and irritating vapours. Stable under normal conditions.
Chemical stability:	When stored appropriately this product should show no significant degradation for 2 years from the date of manufacture. Avoid strong basic, acidic or oxidising materials.
Hazardous decomposition product(s):	None under normal conditions of storage and of use. No data available.

Conditions to avoid:	No data available. Store only in the original container.
Incompatible materials:	

11) Toxicological Information: Based on data for formulated product

Acute:

Oral LD50 : 1950 mg / kg Rats.
Dermal LD50 : > 4000 mg / kg Rats
Inhalation : Derived from active ingredient: Rat, 4 hour, LC₅₀: 0.558 mg/L air. Toxic by inhalation.
Aspiration toxicity: NA
Skin irritation: Not an irritant
Eye irritation : Not an irritant
Sensitization : Not a sensitizer
Other:

Repeated dose toxicity
N/A

Mutagenicity
Diafenthiuron did not show mutagenic or teratogenic effects in animal experiments.

Carcinogenicity:
In animal studies (rat, mouse, dog), prolonged exposure to diafenthiuron has been shown to produce lung damage. In mice, chronic oral administration has produced lung tumours at high dose levels.

Reproductive toxicity:
Diafenthiuron did not show reproductive toxicity effects in animal experiments.

Teratogenicity:
No data available.

12) Ecological Information:

Information below based on active ingredient:

Bees : LD₅₀ µg/bees: 1.5 (contact) (48 h), 2.1 (oral) (48 h)
Birds : Acute oral LD₅₀ for bobwhite quail and mallard ducks >1500 mg/kg. Dietary LC₅₀ (8 d) for bobwhite quail and mallard ducks >1500 mg/kg diet.
Fish : LC₅₀ (96 h) for carp 0.0038, rainbow trout 0.0007, bluegill sunfish 0.0024 mg/l.
Algae : LC₅₀ (72 h) for Scenedesmus subspicatus >50 mg/l.
Worms : LC₅₀ (14 d) c. >1000 mg/kg soil.

Other aquatic species: Daphnia : LC₅₀ (48 h) 0.00015 mg/l.

Persistence and degradability:

Animals: Study of the absorption, distribution and excretion in rats demonstrated that the major portion of the dose was excreted with the faeces. The compound is degraded to yield its corresponding carbodiimide, which, in turn, reacts with nucleophiles like water and fatty acids to form urea and fatty acid derivatives.

Plants: In plants, diafenthiuron shows a complex metabolism pattern in all crops investigated (cotton, tomatoes and apples). Uptake of residue activity by plants from soil is low.

Soil/Environment: Diafenthiuron and its main metabolites show a strong sorptivity to soil particles. Degradation in soils proceeds rapidly: DT₅₀ <1 h to 1.4 d. Not persistent in soil.

Biodegradability: No data available.

Bioaccumulative potential

Bioaccumulation: Bioaccumulates.

Mobility in soil:

Immobile

Results of PBT and vPvB assessment

This substance is not considered to be persistent, bioaccumulating not toxic (PBT).

This substance is not considered to be very persistent, bioaccumulating not toxic (vPvB).

Other adverse effects:

Additional ecological information: None known

13) Disposal Considerations:

Waste Disposal: In accordance with current regulations and, if necessary, after consultation with the site operator and / or with the responsible authority, the product may be taken to a waste disposal site or incineration plant. Do not contaminate ponds, waterways or ditches with any chemical or used container. Do not dispose of waste into the sewer. Where possible, recycling is preferable to disposal or incineration. If recycling is not practicable, dispose of in accordance with local and national regulations
Do not contaminate water, food or feed by disposal.

Container Disposal: Refer to the product label for instructions.

Invert the empty container over the spraying or mixing tank and allow it to drain for at least thirty seconds after the flow has slowed down to a drip. Thereafter, rinse the container three times with a volume of water equal to at least 30% of the volume of the container. Add the rinsings to the contents of the spray tank before destroying the container in the prescribed manner.

Destroy the empty container by perforation and flattening and dispose of it in a safe way in accordance with local regulations, such as by burning or burying it. Do not use it for any other purpose

14) Transportation Information:

UN NUMBER: 3082

Road Transport ADR/ RID:

Class: 9

Packaging group: III

Proper shipping name: Environmentally Hazardous Substance, Liquid, N.O.S. (Diafenthiuron)

Labels : 9

Environmental hazards: Environmentally hazardous.

Special precautions for user: None known.

Maritime Transport IMDG / IMO:

Class: 9

Packaging group: III

Proper shipping name: Environmentally Hazardous Substance, Liquid, N.O.S. (Diafenthiuron)

Labels : 9

Environmental hazards: Environmentally hazardous, marine pollutant.

Special precautions for user: None known.

Air (ICAO / IATA):

Class: 9

Packaging group: III

Proper shipping name: Environmentally Hazardous Substance, Liquid, N.O.S. (Diafenthiuron)

Labels : 9

Environmental hazards: Environmentally hazardous.

Special precautions for user: None known.

Transport in bulk (according to Annex II of MARPOL 73/78 and the IBC code): NA

15) Regulatory Information:

Safety, health and environmental regulations / legislation specific for the substance or mixture.

To avoid risks to man and the environment, comply with all instructions for use.

Advice on handling of the product can be found in sections 7 and 8 of this safety data sheet.

For the proper and safe use of this product, please refer to the approval conditions indicated in the product label.

Labelling according to EC directives:

Hazardous components which must be listed on the label: Fenpyroximate

Symbol(s) Xn - Harmful

N - Dangerous for the environment

Risk-phrase(s):

R23 - Toxic by inhalation.

R48/21/22 - Harmful: danger of serious damage to health by prolonged exposure in contact with skin and if swallowed.

R50/53 - Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Safety-phrase(s):

S2 - Keep out of reach of children

S13 - Keep away from food, drink and animal feeding stuffs.

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

S24/25 - Avoid contact with skin and eyes.

S26 - In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

S37 - Wear suitable gloves.

S39 - Wear eye / face protection.

S45 - In case of an accident, or if you feel unwell, seek medical advice immediately (show label where possible)

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

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

S63 - In case of accident by inhalation; remove casualty to fresh air and keep at rest.

Hazard-Statements

H302 - Harmful if swallowed.

H331 - Toxic if inhaled.

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

H400 - Very toxic to aquatic life.

H410 - Very toxic to aquatic life with long lasting effects.

Precautionary statements:

P102: Keep out of reach of children.

P270: Do not eat, drink or smoke when using this product.

P261: Avoid breathing dust / fume / gas / mist / vapours / spray.

P271: Use only outdoors or in a well-ventilated area.

P301 + P 312: IF SWALLOWED: Call a POISON CENTER or doctor / physician if you feel unwell.

P304 + P340: IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.

P311: Call a POISON CENTER or doctor / physician

P391 Collect spillage.

P501 Dispose of contents/container to an approved waste disposal plant.

Special labelling of certain mixtures:

To avoid risks to man and the environment, comply with the instructions for use.

Remarks

Classified using all GHS hazard classes and categories. In cases where the GHS contains options, the most conservative option has been selected. Regional or national implementations of GHS may not implement all hazard classes and categories.

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. The information contained herein is provided in good faith but makes no representation as to its comprehensiveness or accuracy. A properly trained person using this product intends this document only as a guide to the appropriate handling of the material. Individuals receiving the information must exercise their independent judgment in determining its appropriateness for a particular purpose.

MERIDIAN AGRITECH MAKES NO REPRESENTATION OR WARRANTIES, EITHER EXPRESSED OR IMPLIED, INCLUDING WITHOUT LIMITATION ANY WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE WITH RESPECT TO THE INFORMATION SET FORTH HEREIN OR THE PRODUCT

TO WHICH THE INFORMATION REFERS. ACCORDINGLY, MERIDIAN AGRITECH (PTY) LTD WILL NOT BE RESPONSIBLE FOR DAMAGES RESULTING FROM USE OF OR RELIANCE UPON THIS INFORMATION.