


## Safety Data Sheet

### VETO PLUS - Reg. No: L 9776 (Act No 36 of 1947)

<b>1) PRODUCT AND COMPANY IDENTIFICATION</b>	
<b>Product name:</b>	<b>VETO PLUS</b>
<b>Other means of identification:</b>	Bupirimate 250 g/L + Hexaconazole 30 g/L EC
<b>Chemical Name:</b>	5-butyl-2-ethylamino-6-methylpyrimidin-4-yl dimethylsulfamate. (RS)-2-(2,4-dichlorophenyl)-1-(1H-1,2,4-triazol-1-yl)hexan-2-ol.
<b>Recommended use:</b>	Fungicide
<b>Restrictions on use:</b>	Agriculture
<b>UN No:</b>	1993
<b>Distributed by:</b>	MERIDIAN AGRITECH P O BOX 436 MODDERFONTEIN TEL 011 8228509 FAX 0866901386 MOBILE: 083 400 6056 www.agritech.co.za
<b>Emergency Number:</b>	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.
<b>2) HAZARDS IDENTIFICATION</b>	
<b>Classification of the substance/mixture:</b>	Acute Toxicity (Oral) Category 4 Acute Toxicity (Dermal) Category 3 Acute Toxicity (Inhalation) Category 4 Eye Irritation Category 2 Eye Damage Category 1 Skin Irritation Category 2 Skin Sensitization Category 1 Carcinogenicity Category 2 Aquatic Chronic Category 2
<b>Label Elements: Globally Harmonized System, EU (GHS):</b>	<p><b>Pictograms:</b></p>  <p>Single Word: Warning</p> <p><b>Hazard Statements:</b>  <b>H226:</b> Flammable liquid and vapour.  <b>H302:</b> Harmful if swallowed.  <b>H311:</b> Toxic in contact with skin.  <b>H312:</b> Harmful in contact with skin.  <b>H315:</b> Causes skin irritation.  <b>H317:</b> May cause an allergic skin reaction.  <b>H318:</b> Causes serious eye damage.  <b>H319:</b> Causes serious eye irritation.  <b>H332:</b> Harmful if inhaled.  <b>H351:</b> Suspected of causing cancer.  <b>H400:</b> Very toxic to aquatic life.</p>

According to Directive 67/548/EEC No. 1272/2008 [CLP]:

**H410:** Very toxic to aquatic life with long lasting effects.

**H411:** 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.

**P260:** Do not breathe fumes/vapours/spray.

**P262:** Do not get in eyes, on skin, or on clothing.

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

**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.

**P321:** Specific treatment (See First aid measures on this label)

**P362+P364:** Take off contaminated clothing and wash it before reuse.

**P405:** Store locked up.

**Hazard Symbol(s):**

**F:** Flammable

**Xi:** Irritant

**Xn:** Harmful

**N:** Environmentally dangerous

**R-phrases(s):**

**R10:** Flammable

**R20/22:** Harmful by inhalation and if swallowed.

**R36/37/38:** Irritating to eyes, respiratory system and skin.

**R51/53:** Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

**R65:** Harmful: May cause drowsiness and dizziness.

**R66:** Repeated exposure may cause skin dryness and cracking.

**R67:** Vapour may cause drowsiness and dizziness.

**S-phrases(s):**

**S1/2:** Keep locked up and out of reach of children.

**S13:** Keep away from food, drink, and animal feedstuffs.

**S23:** Do not breathe vapour / spray.

**S24/25:** Avoid contact with skin and eyes.

**S36/37/39:** Wear suitable protective clothing, gloves and eye/face protection.

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

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

**S62:** If swallowed, do not induce vomiting: seek medical advice immediately and show this container or label.

**3) COMPOSITION / INFORMATION ON ING**

**3.1 Substances:**

Not applicable

**3.2 Mixtures:**


Chemical name	Composition	CAS No.	EC No.	Classification according to Regulation EC 1272/2008 (CLP)
Bupirimate	250 g/L	41486-43-6	255-391-2	Skin Sens. Cat. 1B (H317) Carc. Cat. 2 (H351) Aquatic Chronic Cat. 1 (H410) Acute Tox. Cat. 3 (H311)
Hexaconazole	30 g/L	79983-71-4	413-050-7	Acute Tox. Cat. 4 (H302) Skin Sens. Cat. 1 (H317) Aquatic Chronic Cat. 2 (H411)
Benzyl alcohol	10%	100-51-6	202-859-9	Acute Tox. Cat. 4 (H302) Acute Tox. Cat. 4 (H332) Eye Irrit. Cat. 2 (H319) Acute Tox. Cat. 4 (H312) Eye Dam. Cat. 1 (H318) Skin Irrit. Cat. 2 (H315) Skin Sens. Cat. 1 (H317)

4) FIRST AID MEASURES	
<p><b>Eye contact:</b></p> <p><b>Skin contact:</b></p> <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>Should irritation occur, rinse immediately with large amounts of clean water. <b>Seek medical assistance.</b></p> <p>Carefully remove contaminated clothing and decontaminate before reuse. Wash affected area with soap and water for 15 minutes. Seek medical aid if irritation persists.</p> <p>Wash out mouth with water if victim is able, alert and conscious. Never give anything by mouth to an unconscious person. Do not induce vomiting. Keep patient at rest. <b>Seek medical assistance.</b> If vomiting occurs, keep the head lower than hips to prevent aspiration.</p> <p>Remove the victim to fresh air. Keep the victim warm and at rest. If breathing stops, administer artificial respiration. <b>Seek medical assistance.</b></p> <p>Symptoms not known.</p> <p>Treat symptomatically and supportively. If gastric lavage is performed: endotracheal control and / or esophagoscopy is recommended. The administration of activated charcoal is also recommended.</p>
5) FIRE-FIGHTING MEASURES	
<p><b>Extinguishing Media:</b></p> <p><b>Unsuitable Extinguishing Media:</b></p> <p><b>Specific Hazards arising from the substance/mixture:</b></p> <p><b>Fire Fighting:</b></p> <p><b>Protective clothing:</b></p>	<p>Small fires: Foam, dry chemical, or carbon dioxide. Large fires: water fog or alcohol resistant foam.</p> <p>Avoid the use of a solid water stream as this may cause spreading.</p> <p>Fire may produce irritating or poisonous vapours (carbon monoxide, smoke, nitrogen oxides, and partly oxidised hydrocarbon fragments), mists or other hazardous products of combustion.</p> <p>Try to contain spills, minimise spillage entering drains or water courses. Water spray may be used for the cooling of unaffected stock. Remove spectators from the surrounding area. Isolate the affected area and evacuate downwind. Keep upwind. Use the appropriate type of extinguisher for the type of surrounding fire. Fight the fire from the maximum distance using an unmanned hose holder or monitor hoses. Keep containers cool by spraying with water. Contain run off to prevent entry into water or drainage systems. Avoid inhaling hazardous vapours and fumes from the burning materials. Remove unaffected containers from the fire area if possible and if safe to do so. Use as little water as possible. Dyke the fire control water for later disposal. Avoid the accumulation of polluted run-off from the site of the incident.</p> <p>Full protective clothing and self-contained breathing apparatus</p>
6) ACCIDENTAL RELEASE MEASURES	
<p><b>Personal precautions, protective equipment and emergency procedures:</b></p> <p><b>Environmental precautions:</b></p>	<p>Avoid skin and eye contact. Do not breathe in the spray or fumes. For personal protection see Section 8</p> <p>Do not allow this product to enter drains or watercourses. Any spillages or uncontrolled discharges into any watercourses or public waters must be reported immediately to the police and to the Department of Water / Environmental Affairs. Considered to be a marine pollutant.</p>

<p><b>Methods and material for containment and cleaning up:</b></p>	<p>Wear protective clothing. Clear area of unprotected personnel and keep unprotected personnel upwind. Recover the free liquid with explosion proof pumps, Contain and absorb spills with inert material such as clay, dirt, sand or other suitable non-combustible absorbent material. Use an approved industrial vacuum cleaner for removal and place in suitable, dry and properly labelled waste containers. Wash area with water and detergent and absorb with further inert material. If the potential for fire exists, blanket the spill with foam as a precaution. If the product comes into contact with water, contain the contaminated water for later disposal. Prevent the material from spreading by damming in with an absorptive material. Do not flush the spilled material into the drains. If spill does enter waterways contact the local authority.</p> <p>Dispose of this material and its container at a hazardous or special waste collection point.</p>
<p><b>7) HANDLING &amp; STORAGE</b></p>	
<p><b>Precautions for Safe Handling:</b></p>          <p><b>Conditions for Safe Storage, including any incompatibilities:</b></p>	<p>Harmful if inhaled or swallowed and irritating to the eyes and skin. Avoid contact with eyes and skin and avoid inhalation of the spray and vapour. Use with adequate ventilation. Wash hands before eating, drinking, smoking, chewing gum, or using the toilet. Operators should change and wash clothing each day. Immediately remove clothing of this product gets inside. Thereafter, wash the skin thoroughly with a non-abrasive soap and water and put on clean clothing. Do not apply directly to any areas where surface water is present, or to intertidal below the mean high water mark. Any water used to clean equipment must be disposed of correctly in order to avoid contamination. When transferring more than 5 Litres of this product, ground the container before handling in order to prevent static discharge (which may cause ignition). Do not cut, drill, weld or grind anywhere on or near this container.</p> <p>Store in accordance with local regulations. Store in the original, tightly closed container in an isolated, cool (&lt;37°C), dry, well-ventilated area away from sources of ignition and of heat. Keep under lock and key out of reach of children, unauthorized persons and animals. Keep away from food, drink and animal feeds. Bupirimate is rapidly decomposed by U.V irradiation in aqueous solutions. Protect from direct sunlight and from frost.</p>
<p><b>8) EXPOSURE CONTROL / PERSONAL PROTECTION</b></p>	

<b>Appropriate Engineering Controls:</b>	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.
<b>Control Parameters: Occupational exposure limits:</b>	None known.
<b><u>PERSONAL PROTECTIVE EQUIPMENT:</u></b>	
<b>Clothing:</b>	Employee must wear appropriate protective (impervious) clothing, boots and equipment in order to prevent repeated or prolonged skin contact with this substance.
<b>Respiratory protection:</b>	An approved respirator suitable for protection from mists of pesticides should be worn. The limitations of the respirator use as specified by the approval agency and the manufacturer must be observed.
<b>Gloves:</b>	The employee must wear appropriate synthetic protective gloves.
<b>Eye protection:</b>	Safety goggles or a face shield are recommended.
<b>Emergency eye wash:</b>	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.
<b>9) PHYSICAL &amp; CHEMICAL PROPERTIES</b>	
<b>Appearance:</b>	Light tan liquid
<b>Odour:</b>	Characteristic
<b>Odour threshold:</b>	No data available
<b>pH:</b>	6.3
<b>Melting point / Freezing point</b>	No data available
<b>Initial boiling point and boiling range</b>	No data available
<b>Flash point:</b>	36° C
<b>Evaporation rate:</b>	No data available
<b>Flammability (solid, gas)</b>	Product is flammable.
<b>Upper/ lower flammability or explosive limits:</b>	No data available
<b>Vapour pressure:</b>	No data available
<b>Vapour density:</b>	No data available
<b>Relative density:</b>	1.01 g/cm3
<b>Solubility(ies)</b>	Emulsifies in water.
<b>Partition coefficient: n-octanol/water</b>	No data available
<b>Auto-ignition temperature:</b>	No data available
<b>Viscosity:</b>	No data available
<b>10) STABILITY &amp; REACTIVITY</b>	
<b>Reactivity:</b>	Stable under normal storage conditions.
<b>Chemical Stability:</b>	When stored appropriately this product should show no significant degradation for 2 years from the date of manufacture.
<b>Possibility of hazardous reactions:</b>	No hazardous reactions if stored and handled as indicated.
<b>Conditions to avoid:</b>	Protect from direct sunlight and from frost.
<b>Incompatible materials:</b>	None known.
<b>Hazardous decomposition product(s):</b>	Fire may produce harmful products of combustion such as carbon dioxide and (if combustion is complete) carbon monoxide and smoke. Nitrogen, compounds of nitrogen and, under certain circumstances, nitrogen oxides. Sulphur oxides (where sulphur dioxide is a respiratory hazard) and compounds of sulphur.

11) TOXICOLOGICAL INFORMATION	
<b>Acute Toxicity:</b> <b>Oral:</b> <b>Dermal:</b> <b>Inhalation:</b>	LD <sub>50</sub> >300 mg/kg for rats. LD <sub>50</sub> >3000 ml/kg Slight toxicity. Unlikely to cause harmful effects under normal conditions of handling and use.
<b>Skin Corrosion/Irritation:</b>	Moderate to severe irritant.
<b>Serious Eye Damage/Irritation:</b>	Severe irritant
<b>Respiratory or Skin Sensitization:</b>	Mild skin sensitizer (guinea pigs).
<b>Germ Cell Mutagenicity:</b>	No data available
<b>Carcinogenicity:</b>	Suspected of causing cancer.
<b>Reproductive Toxicity:</b>	No data available
<b>STOT-SE:</b>	No data available
<b>STOT-RE:</b>	Repeated exposure may cause skin dryness and cracking.
<b>Aspiration Hazard:</b>	No data available
12) ECOLOGICAL INFORMATION	
<b>Ecotoxicity:</b> <b><u>Bupirimate</u></b> <b>Birds:</b>  <b>Fish:</b> <b>Daphnia:</b> <b>Bees:</b>  <b><u>Hexaconazole</u></b> <b>Birds:</b> <b>Fish:</b>  <b>Daphnia:</b> <b>Algae:</b> <b>Worms:</b> <b>Bees:</b>	Acute oral LD <sub>50</sub> for quail >5200, pigeons >2700 mg/kg. Oral LC <sub>50</sub> (5 d) for bobwhite quail and mallard ducks >10 000 mg/kg. LC <sub>50</sub> (96 h) for rainbow trout 1.4 mg/l. LC <sub>50</sub> (48 h) 7.3 mg/l NOEL: (oral) 0.20 mg/bee; (contact) 0.050 mg/bee.  Acute oral LD <sub>50</sub> for mallard ducks >4000 mg/kg. LC <sub>50</sub> (96 h) for rainbow trout: 3.4, mirror carp 5.94, sheepshead minnows 5.4 mg/L. LC <sub>50</sub> (48 h) 2. mg/l EbC <sub>50</sub> (72 h) 1.7 mg/l. LC <sub>50</sub> (14 d) >1000 mg/kg dry soil. Acute oral and contact LD <sub>50</sub> for honeybees >0.1 mg/bee
<b>Persistence and Degradability:</b>	<b>Bupirimate</b> Soil/Environment In soil, the major degradation product is ethirimol. Soil DT <sub>50</sub> 35–90 d (non-sterile flooded or non-flooded soils, pH 5.1–7.3).  <b>Hexaconazole:</b> Soil/Environment. Rapidly degraded in soils in laboratory tests.
<b>Bio-accumulative Potential:</b>	<b>Bupirimate</b> Animals: In mammals, following oral administration, 68% of the dose is eliminated in the urine within 24 hours; 77% is eliminated in the urine and 21% in the faeces within 10 days.  <b>Hexaconazole</b> Readily excreted by mammals, with no significant retention in organs or tissues.
<b>Mobility in Soil:</b>	Not available
13) DISPOSAL CONSIDERATIONS	
<b>Waste Disposal:</b>	In accordance with local and national regulations. Open dumping or burning of this product is prohibited. Waste generated from the use of this product cannot be reused or re-processed. Never pour untreated waste or surplus products into public sewers or where there is a danger of run-off or seepage into any water systems. Do not contaminate rivers, dams or other water sources with the product or used containers.  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.

<b>Container Disposal:</b>	<p>In accordance with local and national regulations. Empty containers retain vapour and product residues.</p> <p>Refer to the product label for instructions. Triple rinse the empty containers.</p> <p>Do not re-use the empty container for any other purpose.</p> <p>Empty containers must be destroyed by perforation and flattening and then buried in an approved dump site.</p> <p>Prevent contamination of food, feedstuffs, water and eating utensils.</p>
<b>14) TRANSPORTATION INFORMATION</b>	
<b>Road Transport ADR / IRD:</b>	<p>UN NUMBER: 1993</p> <p>UN Proper Shipping name: FLAMMABLE, LIQUID. N.O.S. ( SOLVENTS, BUPIRIMATE, HEXACONAZOLE)</p> <p>Transport Hazard Class: 3</p> <p>Packaging group: III</p> <p>Labelling no: 3</p> <p>Environmental Hazards: Not applicable</p> <p>Special Precautions for User: Read safety instructions, SDS and emergency procedures before handling.</p>
<b>Maritime Transport IMDG / IMO:</b>	<p>UN NUMBER: 1993</p> <p>UN Proper Shipping name: FLAMMABLE, LIQUID. N.O.S. ( SOLVENTS, BUPIRIMATE, HEXACONAZOLE)</p> <p>Transport Hazard Class: 3</p> <p>Packaging group: III</p> <p>Labelling no: 3</p> <p>Environmental Hazards: Marine Pollutant</p> <p>Special Precautions for User: Read safety instructions, SDS and emergency procedures before handling.</p>
	
<b>Air Transport ICAO / IATA:</b>	<p>UN NUMBER: 1993</p> <p>UN Proper Shipping name: FLAMMABLE, LIQUID. N.O.S. ( SOLVENTS, BUPIRIMATE, HEXACONAZOLE)</p> <p>Transport Hazard Class: 3</p> <p>Packaging group: III</p> <p>Labelling no: 3</p> <p>Environmental Hazards: Not applicable</p> <p>Special Precautions for User: Read safety instructions, SDS and emergency procedures before handling.</p>
<b>Transport in Bulk (according to Annex II of MARPOL 73/78 and the IBC Code):</b>	No transport in bulk according to the IBC Code.
<b>15) REGULATORY INFORMATION</b>	
<b>Safety, health and environmental regulations/legislation specific for the substance/mixture:</b>	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)
<b>Chemical Safety Assessment:</b>	Advice on product handling can be found in sections 7 and 8 of this safety data sheet.
<b>16) OTHER INFORMATION</b>	
<p>All information and instructions provided in this Material Safety Data Sheet (MSDS) are based on the current state of scientific and technical knowledge at the date indicated on the present MSDS 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 MSDS 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 MSDS to their own MSDS.</p> <p>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 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.</p> <p>MERIDIAN AGRITECH MAKES NO REPRESENTATION OR WARRANTIES, EITHER EXPRESSED OR IMPLIED, INCLUDING WITHOUT LIMITATION ANY WARRANTIES OF MERCHANT ABILITY, FITNESS FOR A PARTICULAR PURPOSE WITH RESPECT TO THE INFORMATION SET FORTH HEREIN OR THE PRODUCT TO WHICH THE INFORMATION REFERS. ACCORDINGLY, MERIDIAN AGRITECH WILL NOT BE RESPONSIBLE FOR DAMAGES RESULTING FROM USE OF OR RELIANCE UPON THIS INFORMATION.</p>	

Date of issue: 08/06/2015  
Date of revision: 01/04/2020

**Abbreviations and acronyms:**

1. CAS number: Chemical Abstracts Service number.
2. CLP: Classification, Labelling, Packaging.
3. LD<sub>50</sub>: Lethal Dose for 50% of the test population.
4. LC<sub>50</sub>: Lethal Concentration for 50% of the test population.
5. DT<sub>50</sub>: Half-life.
6. GHS: Globally Harmonised System (of Classification and Labelling of Chemicals).

**Literature References:**

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