


## Safety Data Sheet

### VETO EW - Reg. No: L 9656 (Act No 36 of 1947)

1) PRODUCT AND COMPANY IDENTIFICATION	
Product name:	VETO EW
Other means of identification:	Bupirimate 250 EW
Chemical Name:	5-butyl-2-ethylamino-6-methylpyrimidin-4-yl dimethylsulfamate
Recommended use:	Fungicide
Restrictions in use:	Agriculture
UN No:	1993
Distributed by:	MERIDIAN AGRITECH P O BOX 436 MODDERFONTEIN TEL 011 8228509 FAX 0866901386 MOBILE: 083 400 6056 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:	Acute Toxicity (Oral) Category 3 Acute Toxicity (Dermal) Category 4 Skin Sensitization Category 1B Skin Irritation Category 3 Mutagenicity Category 1B Reproductive toxicity Category 1B Carcinogenicity Category 2 STOT RE Category 2 (Kidney, Oral) Aquatic Chronic Category 2
Label Elements: Globally Harmonized System, EU (GHS):	Pictograms:  Signal Word: Danger  <b>Hazard Statements:</b> <b>H302:</b> Harmful if swallowed. <b>H311:</b> Toxic in contact with skin. <b>H315:</b> Causes skin irritation. <b>H317:</b> May cause an allergic skin reaction. <b>H319:</b> Causes serious eye irritation. <b>H336:</b> May cause drowsiness or dizziness. <b>H340:</b> May cause genetic defects. <b>H351:</b> Suspected of causing cancer.

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

**H360:** May damage fertility or the unborn child.  
**H373:** May cause damage to organs through prolonged or repeated exposure.  
**H410:** Very toxic to aquatic life with long-lasting effects.  
**H412:** Harmful to aquatic life with long-lasting effects.

**Precautionary Statements:**

**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.  
**P201:** Obtain special instructions before use.  
**P202:** Do not handle until all safety precautions have been read and understood.  
**P262:** Do not get in eyes, on skin, or on clothing.  
**P263:** Avoid contact during pregnancy/while nursing.  
**P264:** Wash hands, face and clothing thoroughly after handling.  
**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 Symbols:**

**Xn:** Harmful  
**Xi:** Irritant  
**N:** Dangerous for the environment.  
**F:** Flammable

**R-phrase(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-phrase(s):**

**S1/2:** Keep locked up and out of reach of children.  
**S7/9:** Keep container tightly closed and in a well-ventilated place.  
**S13:** Keep away from food, drink, and animal feedstuffs.  
**S15:** Keep away from heat.  
**S16:** Keep away from sources of ignition – no smoking.  
**S23:** Do not breathe vapour / spray.  
**S24/25:** Avoid contact with skin and eyes.  
**S33:** Take precautionary measures against static discharges.  
**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 INGREDIENTS:**

**3.1 Substances:**

Not applicable

**3.2 Mixtures:**

Chemical name	Concentration	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)
Ethylene glycol	50 g/L	107-21-1	203-473-3	Acute Tox. Cat. 4 (H302) STOT RE Cat. 2 (H373) (Kidney, Oral) STOT SE Cat. 3 (H336) (Central nervous system) Skin Irrit. Cat. 2 (H315) Muta. Cat. 1B (H340) Repr. Cat. 1B (H360) Aquatic Chronic Cat. 3 (H412) Eye Irrit. Cat. 2 (H319)

#### 4) FIRST AID MEASURES

##### Description of First-Aid Measures:

###### Inhalation:

Remove the victim to fresh air. Keep the victim warm and at rest. Seek medical assistance if irritation persists. If breathing stops, administer artificial respiration and seek medical assistance.

###### Skin contact:

Carefully remove contaminated clothing and decontaminate before reuse. Wash affected area with soap and water for 15 minutes. Seek medical aid if irritation persists.

###### Eye contact:

Should irritation occur, rinse immediately with large amounts of clean water. **Seek medical assistance.**

###### Ingestion:

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. **Seek medical assistance.**

###### Most important symptoms and effects, both acute and delayed:

If vomiting occurs, keep the head lower than hips to prevent pulmonary aspiration.

###### Indication of any immediate medical attention and special treatment needed:

None known.

Treat symptomatically and supportively. If ingested, perform gastric lavage, administer activated charcoal.

#### 5) FIRE-FIGHTING MEASURES:

##### Extinguishing media:

Product is flammable.  
Small fires: Foam, dry chemical, or carbon dioxide.  
Large fires: water fog or alcohol resistant foam.  
Try to contain spills, minimise spillage entering drains or water courses.  
Water spray may be used for the cooling of unaffected stock.

##### Unsuitable Extinguishing Media:

Avoid the use of a solid water stream as this may cause spreading.

##### Specific Hazards arising from the substance/mixture:

Fire may produce irritating or poisonous vapours (carbon monoxide, smoke, nitrogen oxides, and partly oxidised hydrocarbon fragments), mists or other hazardous products of combustion.

##### Specific firefighting methods:




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.

##### Protective clothing:

	Full protective clothing and self-contained breathing apparatus.
<b>6) ACCIDENTAL RELEASE MEASURES:</b>	
<p><b>Personal precautions, protective equipment and emergency procedures:</b>  <b>Environmental precautions:</b></p> <p><b>Methods and material for containment and cleaning up:</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.</p> <p>Considered to be a marine pollutant.</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>
<b>7) HANDLING &amp; STORAGE:</b>	
<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.</p> <p>Use with adequate ventilation.</p> <p>Wash hands before eating, drinking, smoking, chewing gum, or using the toilet.</p> <p>Operators should change and wash clothing each day. Immediately remove clothing if this product penetrates to the interior. Thereafter, wash the skin thoroughly with a nonabrasive 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.</p> <p>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, unauthorised 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>
<b>8) EXPOSURE CONTROL / PERSONAL PROTECTION:</b>	
<p><b>Appropriate Engineering Controls:</b></p> <p><b>Control Parameters: Occupational exposure limits:</b></p> <p><b><u>PERSONAL PROTECTIVE EQUIPMENT:</u></b>  <b>Clothing:</b></p> <p><b>Respiratory protection:</b></p> <p><b>Gloves:</b></p> <p><b>Eye protection:</b></p> <p><b>Emergency eye wash:</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>Not applicable.</p> <p>Employee must wear appropriate protective (impervious) clothing and equipment in order to prevent repeated or prolonged skin contact with this substance.</p> <p>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.</p> <p>The employee must wear appropriate synthetic protective gloves.</p> <p>Safety goggles are recommended.</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>
<b>9) PHYSICAL &amp; CHEMICAL PROPERTIES:</b>	
<b>Appearance:</b>	White creamy liquid
<b>Odour:</b>	Characteristic
<b>Solubility:</b>	In water 13.06 mg/l (pH 7, 20 °C). Soluble in most common organic solvents except paraffins (bupirimate).
<b>pH:</b>	6.6
<b>Odour threshold:</b>	Not available
<b>Melting point / Freezing point</b>	Not available
<b>Initial boiling point and boiling range</b>	Not available
<b>Flash point:</b>	40°C
<b>Evaporation rate:</b>	Not available
<b>Flammability (solid, gas)</b>	Flammable
<b>Upper/ lower flammability or explosive limits:</b>	Not an explosive
<b>Vapour pressure:</b>	Not available
<b>Vapour density:</b>	Not available
<b>Relative density:</b>	1.04 g/cm <sup>3</sup>
<b>Partition coefficient: n-octanol/water</b>	Not available
<b>Auto-ignition temperature:</b>	Not available
<b>Decomposition Temperature:</b>	Not available
<b>Viscosity:</b>	Not available

<b>10) STABILITY &amp; REACTIVITY:</b>	
<b>Reactivity:</b>	Stable under normal conditions.
<b>Chemical Stability:</b>	Stable for 2 years under normal conditions.
<b>Possibility of hazardous reactions:</b>	No hazardous reactions when stored and handled according to prescribed instructions. Avoid excessive heat, open flames and sparks.
<b>Conditions to avoid:</b>	Only store in the original container.
<b>Incompatible materials:</b>	
<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.
<b>11) TOXICOLOGICAL INFORMATION:</b>	
<b>Acute Toxicity:</b>	
<b>Oral:</b>	LD <sub>50</sub> >600 mg/kg for rats. (formulation)
<b>Dermal:</b>	LD <sub>50</sub> >3000 ml/kg for rats 4800 mg/kg.
<b>Inhalation:</b>	Slight toxicity. Unlikely to cause harmful effects under normal conditions of handling and use.
<b>Skin Corrosion/Irritation:</b>	Moderate irritant.
<b>Serious Eye Damage/Irritation:</b>	Not an irritant.
<b>Respiratory or Skin Sensitization:</b>	May cause an allergic skin reaction.
<b>Germ Cell Mutagenicity:</b>	May cause genetic defects.
<b>Carcinogenicity:</b>	Suspected of causing cancer.
<b>Reproductive Toxicity:</b>	May damage fertility or the unborn child.
<b>STOT-SE:</b>	Not applicable.
<b>STOT-RE:</b>	May cause damage to organs through prolonged or repeated exposure
<b>Aspiration Hazard:</b>	Not applicable.
<b>12) ECOLOGICAL INFORMATION: BASED ON BUPIRIMATE TECHNICAL MATERIAL</b>	
<b>Ecotoxicity:</b>	
<b>Birds:</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.
<b>Fish:</b>	LC <sub>50</sub> (96 h) for rainbow trout 1.4 mg/l.
<b>Daphnia:</b>	LC <sub>50</sub> (48 h) 7.3 mg/l
<b>Algae:</b>	No data available.
<b>Worms:</b>	No data available.
<b>Bees:</b>	NOEL: (oral) 0.20 mg/bee; (contact) 0.050 mg/bee.
<b>Persistence and Degradability:</b>	Data given in this section are for the active ingredient: In soil, the major degradation product is ethirimol. Soil DT50 35–90 d (non-sterile flooded or non-flooded soils, pH 5.1–7.3).
<b>Bio-accumulative Potential:</b>	Data given in this section are for the active ingredient: 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>Mobility in Soil:</b>	No data available.
<b>13) DISPOSAL CONSIDERATIONS:</b>	
<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>	In accordance with local and national regulations. Empty containers retain vapour and product residues. Refer to the product label for instructions. Triple rinse the empty containers.

	Do not re-use the empty container for any other purpose. Empty containers must be destroyed by perforation and flattening and then buried in an approved dump site. Prevent contamination of food, feedstuffs, water and eating utensils.
<b>14) TRANSPORTATION INFORMATION:</b>	
<b>Road Transport ADR / IRD:</b>	<p>UN NUMBER: 1993  UN Proper Shipping name: FLAMMABLE, LIQUID. N.O.S. (BUPIRIMATE)  Transport Hazard Class: 3.3  Packaging group: III  Labelling no: 3, 6  Environmental Hazards: Yes  Special Precautions for User: Read safety instructions, SDS and emergency procedures before handling.</p> 
<b>Maritime Transport IMDG / IMO:</b>	<p>UN NUMBER: 1993  UN Proper Shipping name: FLAMMABLE, LIQUID. N.O.S. (BUPIRIMATE)  Transport Hazard Class: 3.3  Packaging group: III  Labelling no: 3, 6  Environmental Hazards: Marine pollutant  Special Precautions for User: Read safety instructions, SDS and emergency procedures before handling.</p> 
<b>Air Transport ICAO / IATA:</b>	<p>UN NUMBER: 1993  UN Proper Shipping name: FLAMMABLE, LIQUID. N.O.S. (BUPIRIMATE)  Transport Hazard Class: 3.3  Packaging group: III  Labelling no: 3, 6  Environmental Hazards: Yes  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>	Not applicable
<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>	

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.

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**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).
7. EC: Enzyme Commission.

**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>