


## Safety Data Sheet

# Imazalil sulphate L7285 (Act 36 of 1947)

1) PRODUCT AND COMPANY IDENTIFICATION	
Product name:	Imazalil sulphate
Other means of identification:	Imazalil sulphate 750 g/kg WSP
Chemical Name:	1-[2-(Allyloxy)ethyl-2-(2,4-dichlorophenol)]-1H-imidazolium hydrogen sulphate
Recommended use:	Fungicide
Restrictions on use:	Agriculture
UN No:	2588
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 GRIFFON POISON CENTRE: 082 446 8946.
2) HAZARDS IDENTIFICATION	
Classification of the substance/mixture:	Acute Toxicity (Oral) Category 3 Acute Toxicity (Dermal) Category 5 Acute Toxicity (Inhalation) Category 4 Skin Corrosion Category 1 Skin Sensitization Category 1 Aquatic Acute Category 1 Aquatic Chronic Category 1
Label Elements: Globally Harmonized System, EU (GHS):	<p><b>Pictograms:</b></p>  <p>Signal Word: Danger</p> <p><b>Hazard Statements:</b>  <b>H302:</b> Harmful if swallowed.  <b>H314:</b> Causes severe skin burns and eye damage.  <b>H317:</b> May cause an allergic skin reaction.  <b>H400:</b> Very toxic to aquatic life.  <b>H410:</b> Very toxic to aquatic life with long-lasting effects.</p> <p><b>Precautionary Statements:</b>  <b>P201:</b> Obtain special instructions before use.  <b>P202:</b> Do not handle until all safety precautions have been read and understood.  <b>P262:</b> Do not get in eyes, on skin, or on clothing.  <b>P270:</b> Do not eat, drink or smoke when using the product.</p>

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

**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):**

Xn – dangerous to health  
Xi - Irritant  
N – dangerous for the environment

**R-phrases(s):**

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

**S-phrases(s):**

**S2:** Keep out of reach of children.  
**S13:** Keep away from food, drink and animal feeding stuffs.  
**S24/25:** Avoid contact with skin and eyes.  
**S26:** In case of contact with eyes, rinse immediately with plenty of water and seek advice.  
**S37/39:** Wear suitable gloves and eye/face protection.  
**S60:** This material and its container, must be disposed of as hazardous waste.  
**S61:** Avoid release to the environment.

**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)
Imazalil Sulphate	750 g/kg	58594-72*2	261-351-5	Acute Tox 4 (H302) Skin Corr. 1B (H314) Skin Sens. 1 (H317) Aquatic Acute 1 (H400) Aquatic Chronic 1 (H410)
Sulphuric acid	24%	7664-93-9	231-639-5	Skin Corr. 1A (H314)

**4) FIRST AID MEASURES**

**Description of First-Aid Measures:**

**Inhalation:**

Remove patient to fresh air. Loosen clothing around neck. Lie down and keep warm and rested. Administer oxygen or artificial respiration if necessary. Seek medical assistance if necessary.

**Skin contact:**

Strip off all contaminated clothing and thoroughly wash body with soap and water. Persons providing first aid must wear gloves to avoid self-contamination. Get medical attention if necessary. Skin which becomes sensitised may require anti-inflammatory agents or cortisone creams.

**Eye contact:**

Flush eyes with plenty of water for 15 minutes holding eyelids open. Seek medical assistance if necessary. Use safety goggles.

**Ingestion:**


In cases where significant quantities of the product have been ingested, call a physician and show this data sheet. Never give anything by mouth to an unconscious person.

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

The following symptoms are not likely to occur unless the absorbed dose is extraordinary. Symptoms include

<p><b>Indication of any immediate medical attention and special treatment needed:</b></p>	<p>itching, scratchy throat, sneezing and coughing, nausea, vomiting, diarrhoea, headache, ataxia, confusion and fatigue.</p> <p>No specific antidotes are available. Give symptomatic treatment and supportive therapy as indicated. If large quantities of the fungicide have been ingested and if severe vomiting has occurred, perform gastric lavage and administer activated charcoal. If ingestion was minimal, administration of charcoal without gastric lavage together with close observation of the patient, should be sufficient to ensure full recovery.</p>
<p><b>5) FIRE-FIGHTING MEASURES</b></p>	
<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>For small fires, use foam, carbon dioxide, dry powder or halon extinguishant. For large fires, use foam or water-fog. Water can be used for cooling of unaffected stock, but avoid the accumulation of polluted run-off from the site. Contain fire control water for later disposal.</p> <p>Do not use high volume water jet, due to contamination risk.</p> <p>May generate poisonous and corrosive fumes.</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. 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. On small fires: If area is heavily exposed to fire and if conditions permit, let fire burn itself out since water may increase the area contaminated. Cool containers/tanks with spray water.</p> <p>Generating poisonous and corrosive fumes.</p> <p>Full protective clothing and self-contained breathing apparatus</p>
<p><b>6) ACCIDENTAL RELEASE MEASURES</b></p>	
<p><b>Personal precautions, protective equipment and emergency procedures:</b></p> <p><b>Environmental precautions:</b></p> <p><b>Methods and material for containment and cleaning up:</b></p>	<p>Avoid contact with skin and eyes. Do not breathe in spray or fumes. For personal protection see Section 8. 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>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. Sweep up with damp earth, sand or suitable absorptive material without causing a dust cloud. Prevent product from spreading and collect into specially marked, tightly closing containers. Treat contaminated areas with water containing soda or detergent. 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.</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>Avoid skin and eye contact and inhalation of spray mist. Avoid inhalation of fog and vapours. Do NOT contaminate dams, rivers or streams, or any other water bodies with chemical or used containers.</p>

	Store in original container tightly closed and in a locked, dry, cool, well-ventilated area away from foodstuffs, fertilisers and seeds and out of direct sunlight. Keep away from children or uninformed persons.
<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>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. Facilities should be equipped with an eyewash facility and a safety shower.</p> <p>TLV not established.</p> <p>Employee must wear appropriate protective (impervious) clothing and equipment to prevent repeated or prolonged skin contact with this substance. cotton overalls buttoned to the neck and wrist, water resistant footwear and a washable hat.</p> <p>Employee must wear appropriate chemical-resistant gloves to prevent contact with this substance (elbow-length PVC gloves)</p> <p>Chemically resistant eye goggles or face mask</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>Form:</b>	Powder
<b>Colour:</b>	White to off-white powder
<b>Odour:</b>	Phenolic odour
<b>pH:</b>	1 – 3
<b>Odour threshold:</b>	No data available
<b>Melting point / Freezing point</b>	Between 118 – 130°C
<b>Initial boiling point and boiling range</b>	No data available
<b>Flash point:</b>	No data available
<b>Evaporation rate:</b>	No data available
<b>Flammability (solid, gas)</b>	Not highly 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>	No data available
<b>Solubility(ies)</b>	Soluble in water.
<b>Partition coefficient: n-octanol/water</b>	No data available
<b>Auto-ignition temperature:</b>	No data available
<b>Decomposition temperature:</b>	No data available
<b>Viscosity:</b>	No data available
<b>10) STABILITY &amp; REACTIVITY</b>	
<p><b>Reactivity:</b></p> <p><b>Chemical Stability:</b></p> <p><b>Possibility of hazardous reactions:</b></p> <p><b>Conditions to avoid:</b></p> <p><b>Incompatible materials:</b></p> <p><b>Hazardous decomposition product(s):</b></p>	<p>No hazardous reactions if stored and handled as indicated.</p> <p>Stable under normal conditions but decomposes upon exposure to light.</p> <p>No hazardous reactions if stored and handled as indicated.</p> <p>Protect from direct sunlight, open flames and heat sources. Decomposes upon heating.</p> <p>Strong oxidizing agents, strong acids, reducing agents and bases.</p> <p>May generate poisonous and corrosive fumes.</p>
<b>11) TOXICOLOGICAL INFORMATION</b>	

<b>Acute Toxicity:</b> <b>Oral:</b> <b>Dermal:</b> <b>Inhalation:</b>	LD <sub>50</sub> > 227mg/kg, rat. LD <sub>50</sub> > 4 200 mg/kg, rabbit. LC <sub>50</sub> (4h) > 2.43 mg/L, rat.
<b>Skin Corrosion/Irritation:</b>	May cause slight irritation
<b>Serious Eye Damage/Irritation:</b>	May cause mild to moderate irritation.
<b>Respiratory or Skin Sensitization:</b>	May cause sensitization.
<b>Germ Cell Mutagenicity:</b>	Not mutagenic.
<b>Carcinogenicity:</b>	No carcinogenic activity in animals.
<b>Reproductive Toxicity:</b>	No data available.
<b>STOT-SE:</b>	No data available.
<b>STOT-RE:</b>	No data available.
<b>Aspiration Hazard:</b>	No data available.
<b>12) ECOLOGICAL INFORMATION</b>	
<b>Ecotoxicity:</b> <b>Birds:</b>  <b>Fish:</b> <b>Daphnia:</b> <b>Algae:</b> <b>Worms:</b> <b>Bees:</b>	LD50 for ring-necked pheasants 2000, quail 510 mg/kg. LC50 (8 d) for mallard ducks >2510 mg/kg b.w. LC <sub>50</sub> (96 h) for rainbow trout 1.5, bluegill sunfish 4.04 mg/l. LC <sub>50</sub> (48 h) 3.5 mg/l. EC <sub>50</sub> 0.87 mg/l. LC <sub>50</sub> for <i>Eisenia foetida</i> 541 mg/kg soil. Not hazardous to bees when used as directed. LD50 (oral) 40 µg/bee.
<b>Persistence and Degradability:</b>	Imazalil was 9% mineralised after 100 d in soil; K <sub>oc</sub> /K <sub>om</sub> 2080–8150 mg/l.
<b>Bio-accumulative Potential:</b>	>85% eliminated within 24h.
<b>Mobility in Soil:</b>	No data available.
<b>13) DISPOSAL CONSIDERATIONS</b>	
<b>Waste Disposal:</b>	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 chemicals waste disposal facility. Spilled product cannot be re-used and must be disposed of by incineration or disposal in a chemical waste disposal facility.
<b>Container Disposal:</b>	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. <b>DO NO REUSE THE CONTAINER FOR ANY OTHER PURPOSE.</b> 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.
<b>14) TRANSPORTATION INFORMATION</b>	
<b>Road Transport ADR / IRD:</b>	UN NUMBER: 2588 UN Proper Shipping name: PESTICIDES. SOLID, TOXIC , N.O.S., Imazalil sulphate Transport Hazard Class: 6.1 Packaging group: III Labelling no: 6.1 Environmental Hazards: Not applicable Special Precautions for User: Read safety instructions, SDS and emergency procedures before handling.
<b>Maritime Transport IMDG / IMO:</b>	UN NUMBER: 2588 UN Proper Shipping name: PESTICIDES. SOLID, TOXIC , N.O.S., Imazalil sulphate Transport Hazard Class: 6.1 Packaging group: III Labelling no: 6.1 Environmental Hazards: Marine Pollutant Special Precautions for User: Read safety instructions, SDS and emergency procedures before handling.  
<b>Air Transport ICAO / IATA:</b>	UN NUMBER: 2588

	UN Proper Shipping name: PESTICIDES. SOLID, TOXIC , N.O.S., Imazalil sulphate Transport Hazard Class: 6.1 Packaging group: III Labelling no: 6.1 Environmental Hazards: Not applicable Special Precautions for User: Read safety instructions, SDS and emergency procedures before handling.
<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 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 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.</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 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.</p> <p>MERIDIAN AGRITECH MAKES NO REPRESENTATION OR WARRANTIES, EITHER EXPRESSES 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 (PTY) LTD WILL NOT BE RESPONSIBLE FOR DAMAGES RESULTING FROM USE OF OR RELIANCE UPON THIS INFORMATION.</p> <p>Date of issue: 05/02/2003  Date of revision: 22/04/2016, 13/01/2021</p> <p><b>Abbreviations and acronyms:</b></p> <ol style="list-style-type: none"> <li>1. CAS number: Chemical Abstracts Service number.</li> <li>2. CLP: Classification, Labelling, Packaging.</li> <li>3. LD<sub>50</sub>: Lethal Dose for 50% of the test population.</li> <li>4. LC<sub>50</sub>: Lethal Concentration for 50% of the test population.</li> <li>5. DT<sub>50</sub>: Half-life.</li> <li>6. GHS: Globally Harmonised System (of Classification and Labelling of Chemicals).</li> <li>7. STOT: Specific Target Organ Toxicity</li> <li>8. SE: Single exposure</li> <li>9. RE: Repeated exposure</li> <li>10. TLV: Threshold limit value</li> </ol> <p><b>Literature References:</b></p> <ul style="list-style-type: none"> <li>• GHS: <a href="http://www.ccohs.ca/oshanswers/chemicals/ghs.html">www.ccohs.ca/oshanswers/chemicals/ghs.html</a></li> <li>• ECHA: <a href="https://echa.europa.eu/search-chemicals">https://echa.europa.eu/search-chemicals</a></li> </ul>	