


Safety Data Sheet

VALIDUS 200 EW

Reg. No: L 8481 (Act No 36 of 1947)

1) PRODUCT AND COMPANY IDENTIFICATION	
Product name:	VALIDUS 200 EW
Other means of identification:	Myclobutanil 200 g/L EW
Chemical name:	(RS)-2-(4-chlorophenyl)-2-(1H-1,2,4-triazol-1-ylmethyl)hexanenitrile (IUPAC)
Recommended use:	Fungicide
Restrictions on use:	Agriculture
UN No:	UN 3082
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 RAPID SPILL RESPONSE 0800 775 3305 GRIFFON POISON CENTRE: 082446 8946.
2) HAZARDS IDENTIFICATION	
Classification of the substance/mixture:	Acute Toxicity (Oral) Category 4 Acute Toxicity (Dermal) Category 4 Acute Toxicity (Inhalation) Category 4 Eye Irritation Category 2 Reproductive Toxicity Category 2 Aspiration Toxicity Category 1 Aquatic Chronic Category 2
Label Elements: Globally Harmonized System, EU (GHS):	<p>Pictograms:</p>  <p>Signal word: Danger</p> <p>Hazard Statements: H226: Flammable liquid and vapour. H302: Harmful if swallowed. H304: May be fatal if swallowed and enters airways. H319: Causes serious eye irritation. H332: Harmful if inhaled. H361d: Suspected of damaging the unborn child. H411: Toxic to aquatic life with long-lasting effects.</p> <p>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 dust/mist/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.</p>

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

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

Risk phrases:
R10: Flammable.
R20/22: Harmful by inhalation and if swallowed.
R36: Irritating to eyes.
R51/53: Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
R63: Possible risk of harm to the unborn child.
R65: Harmful: may cause lung damage if swallowed.

Safety phrases:
S2: Keep out of the reach of children.
S13: Keep away from food, drink and animal feeding stuffs.
S20/21: When using do not eat, drink or smoke.
S23: Do not breathe fumes or vapour.
S24/25: Avoid contact with skin and eyes.
S36/37: Wear suitable protective clothing and gloves.
S46: If swallowed, see medical advice immediately and show this container or label.
S57: Use appropriate container to avoid environmental contamination.
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.
S62: If swallowed, do not induce vomiting: seek medical advice immediately and show this container or label.

3) COMPOSITION / INFORMATION ON INGREDIENTS

Chemical name	Composition (g/L)	CAS No.	EC No.	CLP Classification	DSD Classification
Myclobutanil	200	88671-89-0	618-198-8	Acute Tox. 4, H302 Eye Irrit. 2, H319 Repr. 2, H361d Aquatic Chronic 2, H411	Repr. Cat. 3; R63 Xn; R22 Xi; R36 N; R51-53
Heavy aromatic solvent	<30%	64742-94-5	265-198-5	Asp. Tox. 1; H304	Xn; R65
Cyclohexanone	5%	108-94-1	203-631-1	Flam. Liq. 3, H226 Acute Tox. 4, H332	R10 Xn; R20

4) FIRST AID MEASURES

Description of First-Aid Measures:

Inhalation:

Remove to fresh air. If person is not breathing then give artificial respiration and call for an ambulance, if by mouth to mouth use rescuer protection (pocket mask etc) call a poison information centre or doctor for treatment advice. If breathing is difficult oxygen should be administered by qualified personnel.

Skin contact:

Take off contaminated clothing. After contact with skin, wash immediately with water for 15-20 minutes. Call a poison control centre or doctor for treatment advice.

Eye contact:


If product or spray enters eyes, wash out immediately and continue rinsing with clean water for at least 15 minutes. Obtain medical attention. Remove contact lenses, if present after the first 5 minutes, and then continue rinsing eyes.

Ingestion:

Immediately call a poison control centre or doctor. Do not induce vomiting unless told to do so by a poison control centre or doctor.

<p>Most important symptoms and effects, both acute and delayed:</p> <p>Indication of any immediate medical attention and special treatment needed:</p>	<p>Do not give any liquid to the person. Do not give anything by mouth to an unconscious person.</p> <p>None known.</p> <p>Probable mucosal damage may contraindicate the use of gastric lavage. If lavage is performed, suggest endotracheal and or oesophageal control. Danger from lung aspiration must be weighed against toxicity when considering emptying the stomach. No specific antidote. Treatment of exposure should be directed at the control of symptoms and the clinical condition of the patient.</p>
5) FIRE-FIGHTING MEASURES	
<p>Extinguishing Media:</p> <p>Unsuitable Extinguishing Media:</p> <p>Specific Hazards arising from the substance/mixture:</p> <p>Fire Fighting:</p> <p>Protective clothing:</p>	<p>Use the following extinguishing media when fighting fires involving this material: carbon dioxide, dry chemical or water spray</p> <p>Water jet, due to contamination risk.</p> <p>Pesticide particulates can become airborne. Combustion generates toxic fumes of the following: hydrogen chloride and/or hydrogen cyanide.</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. 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. Avoid pollution of waterways.</p> <p>Use protection for the respiratory tract. Self-contained breathing apparatus.</p>
6) ACCIDENTAL RELEASE MEASURES	
<p>Personal precautions, protective equipment and emergency procedures:</p> <p>Environmental precautions:</p> <p>Methods and material for containment and cleaning up:</p>	<p>Wear appropriate protective clothing. Do not touch or walk through spilled material. Wear a face shield or goggles, overalls buttoned to neck and wrist, chemical resistant gloves and boots. Stop leak when safe to do so. Dike area and prevent entry into waterways and drains.</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>Absorb spills with inert material and place in waste containers. Materials such as sand, soil or sawdust can be used. Spill residues may be cleaned using water and detergent. Contain and absorb water for disposal.</p>
7) HANDLING & STORAGE	
<p>Precautions for Safe Handling:</p> <p>Conditions for Safe Storage, including any incompatibilities:</p>	<p>This material may be harmful if swallowed, inhaled or absorbed through the skin. May cause reproductive/ developmental damage and/or organ damage from repeated oral exposure at high doses. May cause internal organ damage from repeated oral exposure at high doses. Do not eat, drink or smoke while using product. Remove protective clothing immediately after handling this product and wash hands and skin before meals and after work. May cause skin and eye irritation. Avoid contact with eyes and skin. Keep out of reach of children. Clean up spilled material immediately, and wash clothes, equipment and work area after use.</p> <p>Store in original container tightly closed and in a locked dry, cool, well ventilated area away from foodstuffs. When stored appropriately this product should show no significant degradation for 2 years from the date of manufacture. Contact your supplier for further information about the use of the product that is older than this.</p>
8) EXPOSURE CONTROL / PERSONAL PROTECTION	
Appropriate Engineering Controls:	<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</p>

Control Parameters: Occupational exposure limits:	occupational safety, environmental, fire, and other applicable regulations.
PERSONAL PROTECTIVE EQUIPMENT:	
Clothing:	Employee must wear appropriate protective (impervious) clothing and equipment to prevent repeated or prolonged skin contact with this substance.
Gloves:	Use chemical resistant gloves.
Eye protection:	Use chemical goggles or a full-face respirator.
Respiratory protection:	Atmospheric levels should be maintained below the exposure guideline. When respiratory protection is required for certain operations, use an air purifying respirator.
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.
9) PHYSICAL & CHEMICAL PROPERTIES	
Form:	Liquid
Colour:	Off-white
Odour:	Aromatic solvent odour
Solubility:	Emulsifies in water
pH:	8-9
Odour threshold:	Not available
Melting point/boiling point:	±100 °C – similar to water
Flash point:	>100 °C
Evaporation rate:	No data available
Flammability:	Flammable liquid
Upper/ lower flammability or explosive limits:	Not available
Vapour pressure:	No data available
Vapour density:	No data available
Density:	1.02 g/cm³
Partition coefficient: n-octanol/water	No data available
Auto-ignition temperature:	> 400 °C
Decomposition Temperature:	Not available
Surface tension:	N/A
Viscosity:	No data available
10) STABILITY & REACTIVITY	
Reactivity:	No hazardous reactions if stored and handled as indicated.
Chemical Stability:	When stored appropriately this product should show no significant degradation for 2 years from the date of manufacture.
Possibility of hazardous reactions:	None under normal conditions.
Conditions to avoid:	Temperature extremes and open flame.
Incompatible materials:	Strong oxidising agents and acids.
Hazardous decomposition product(s):	Hydrogen chloride, hydrogen cyanide, oxides of nitrogen, carbon monoxide.
11) TOXICOLOGICAL INFORMATION	
Acute Toxicity:	
Oral:	LD50 for male rats 1600 and female rats 1800 mg/kg
Dermal:	LD50 > 5 000 mg/kg, rabbits.
Inhalation:	LC50 5.1 mg/L, rats.
Skin Corrosion/Irritation:	Not an irritant.
Serious Eye Damage/Irritation:	May cause mild eye irritation with corneal injury.
Respiratory or Skin Sensitization:	Not a sensitizer.
Germ Cell Mutagenicity:	Not mutagenic in the Ames assay.
Carcinogenicity:	No data available.
Reproductive Toxicity:	Suspected of damaging the unborn child.

STOT-SE:	No data available.
STOT-RE:	No data available.
Aspiration Hazard:	May be fatal if swallowed and enters airways.
12) ECOLOGICAL INFORMATION	
Ecotoxicity:	
Birds:	Acute oral LD50 for bobwhite quail 510 mg/kg. Dietary LC50 (8 d) for bobwhite quail and mallard ducks >5000 mg/kg.
Fish:	LC50 (96 h) for bluegill sunfish 4.4 mg/L and rainbow trout 2.0 mg/L.
Daphnia:	LC50 (48 h) 17 mg/L.
Algae:	EC50 (96 h) for <i>Scenedesmus subspicatus</i> 0.91 mg/L.
Worms:	Acute LC50 for <i>Eisenia foetida</i> 99 mg/kg.
Bees:	LD50 (oral) >33.9 µg/bee and LD50 (contact) >39.6 µg/bee.
Persistence and Degradability:	DT50 (lab., aerobic, 20 °C) 192–574 d (mean 354 d) to give minor metabolites. Under field conditions (Germany, early summer application), biphasic DT50 9–33 d (mean 23 d); DT ₉₀ >1 y.
Bio-accumulative Potential:	Does not accumulate.
Mobility in Soil:	Soil adsorption K_{oc} 224–920 ml/g (mean 517 ml/g).
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. 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. DO NOT REUSE THE CONTAINER FOR ANY OTHER PURPOSE , perforate and flatten. Do not transport if this container is damaged or leaking.
14) TRANSPORTATION INFORMATION	
Road Transport ADR / IRD:	UN NUMBER: 3082 UN Proper Shipping name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (myclobutanil) Transport Hazard Class: 9 Packaging group: III Labelling no: 9 Environmental Hazards: Not applicable Special Precautions for User: Read safety instructions, SDS and emergency procedures before handling.
Maritime Transport IMDG / IMO:	UN NUMBER: 3082 UN Proper Shipping name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (myclobutanil) Transport Hazard Class: 9 Packaging group: III Labelling no: 9 Environmental Hazards: Marine Pollutant Special Precautions for User: Read safety instructions, SDS and emergency procedures before handling.
	
Air Transport ICAO / IATA:	UN NUMBER: 3082 UN Proper Shipping name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (myclobutanil) Transport Hazard Class: 9 Packaging group: III Labelling no: 9 Environmental Hazards: Not applicable Special Precautions for User: Read safety instructions, SDS and emergency procedures before handling.
Transport in Bulk (according to Annex II of MARPOL 73/78 and the IBC Code):	No transport in bulk according to the IBC Code.
15) REGULATORY INFORMATION	

Safety, health and environmental regulations/legislation specific for the substance/mixture:	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)
Chemical Safety Assessment:	Advice on product handling can be found in sections 7 and 8 of this safety data sheet.
16) OTHER INFORMATION	
<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 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: 04/09/2009 Date of revision: 30/11/2016, 25/01/2021</p> <p>Abbreviations and acronyms:</p> <ol style="list-style-type: none"> 1. CAS number: Chemical Abstracts Service number. 2. CLP: Classification, Labelling, Packaging. 3. LD₅₀: Lethal Dose for 50% of the test population. 4. LC₅₀: Lethal Concentration for 50% of the test population. 5. DT₅₀: Half-life. 6. GHS: Globally Harmonised System (of Classification and Labelling of Chemicals). 7. STOT: Specific Target Organ Toxicity 8. SE: Single exposure 9. RE: Repeated exposure 10. TWA: Time-weighted average. <p>Literature References:</p> <ul style="list-style-type: none"> • GHS: www.ccohs.ca/oshanswers/chemicals/ghs.html • ECHA: https://echa.europa.eu/search-chemicals 	