

SAFETY DATA SHEET

Section 1: IDENTIFICATION OF THE MATERIAL AND SUPPLIER

Product Name:	REVUS Fungicide
Other Names:	Product code: A12946B
Recommended Use:	Fungicide for use on grapevines
Company Details:	Syngenta Crop Protection Pty Limited ABN 33 002 933 717
Address:	Level 1, 2-4 Lyonpark Road MACQUARIE PARK NSW 2113 AUSTRALIA
Telephone Number:	(02) 8876 8444
Emergency Telephone Number:	24 hours - 1800 033 111

Section 2: HAZARDS IDENTIFICATION

Hazard Classification:	Not classified as a hazardous chemical according to the Australian criteria for the classification of chemicals
Risk Phrases:	–
Safety Phrases:	–

Section 3: COMPOSITION / INFORMATION ON INGREDIENTS

SUBSTANCE	
Chemical Identity of Pure Substance:	Mandipropamid
Synonym:	NOA446510
CAS Number:	374726-62-2

MIXTURE		
Chemical Identity of Ingredients	CAS No	Proportion (% w/v)
mandipropamid	374726-62-2	25
1,2-propanediol	57-55-6	5 - 10
Other ingredients determined not to be hazardous	-	to 100

Section 4: FIRST AID MEASURES

<p>Description of Necessary First Aid Measures:</p>	<p>In case of poisoning by any exposure route get to a doctor or hospital quickly. Phone Poisons Information Centre on 131 126. Have the product label or SDS with you when calling or going for treatment.</p> <p>Ingestion: Do not induce vomiting. Seek medical attention.</p> <p>Eye contact: Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Remove contact lenses. Immediate medical attention is required.</p> <p>Skin contact: Take off all contaminated clothing immediately. Wash off immediately with plenty of water. Wash contaminated clothing before re-use.</p> <p>Inhalation: Remove to fresh air. Keep patient warm and at rest. If breathing is irregular or stopped, administer artificial respiration.</p>
<p>Poisoning Symptoms: Medical Advice:</p>	<p>Poisoning symptoms in laboratory animals were non-specific. There is no specific antidote available. Treat symptomatically.</p>

Section 5: FIRE FIGHTING MEASURES

<p>Suitable Extinguishing Media:</p>	<p><i>Extinguishing media - small fires</i> Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide. DO NOT use direct jet of water.</p> <p><i>Extinguishing media - large fires</i> alcohol-resistant foam or water spray. DO NOT use direct jet of water.</p>
<p>Hazards from Combustion Products:</p>	<p>This product contains combustible organic components that may burn and decompose during a fire producing dense black smoke containing hazardous products of combustion. Combustion products are toxic and /or irritant. Exposure to decomposition products may be a hazard to health.</p>
<p>Special Protective Precautions and Equipment for Fire Fighters:</p>	<p>In the event of fire, wear protective clothing and self-contained breathing apparatus. Do not allow run-off from fire fighting to enter drains or water courses. Cool closed containers exposed to fire with water spray.</p>
<p>Hazchem Code:</p>	<p>–</p>

Section 6: ACCIDENTAL RELEASE MEASURES

<p>Emergency Procedures:</p>	<p>In case of spillage it is important to take all steps necessary to:</p> <ul style="list-style-type: none"> • Avoid eye and skin contact and inhalation of dust or mist. • Avoid contamination of waterways.
<p>Methods and Materials for Containment and Clean Up:</p>	<p><i>Procedure for spill:</i></p> <ol style="list-style-type: none"> (1) Keep all bystanders away. (2) Wear goggles, half face-piece respirator with combined dust and vapour cartridge, full length clothing and PVC gloves. (3) Reposition any leaking containers so as to minimise further leakage. (4) Dam and absorb spill with an absorbent material (e.g. sand, soil, diatomaceous earth or vermiculite). (5) Shovel the absorbed spill into drums.

<p>(6) Decontaminate the spill area with detergent and water and rinse with the smallest volume of water practicable. Disposal of the absorbed material will depend upon the extent of the spill. Contaminated material must be disposed of in accordance with all local authority requirements.</p> <ul style="list-style-type: none"> • For quantities up to 50 L of product bury in a secure approved landfill site. • For quantities greater than 50 L seek advice from the manufacturer (use emergency contact number below) before attempting disposal. Contain in a secure location until disposal method is established.
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Section 7: HANDLING AND STORAGE

Precautions for Safe Handling:	<p>May irritate the eyes and skin. Avoid contact with eyes and skin. When opening the container and preparing spray wear:</p> <ul style="list-style-type: none"> • elbow-length chemical-resistant gloves • goggles <p>Wash hands after use. After each day's use, wash gloves and goggles.</p>
Conditions for Safe Storage:	<p>No special storage conditions required. Keep containers tightly closed in a dry, cool and well-ventilated place. Keep out of the reach of children. Keep away from food, drink and animal feedstuffs.</p>

Section 8: EXPOSURE CONTROLS / PERSONAL PROTECTION

ALWAYS READ AND FOLLOW THE LABEL INSTRUCTIONS AND WARNINGS

National Exposure Standards:	<i>Component</i>	<i>Exposure limit</i>	<i>Value type</i>
	1,2-propanediol	10 mg/m ³	8 hour TWA
Syngenta Exposure Standards:	<i>Component</i>	<i>Exposure limit</i>	<i>Value type</i>
	mandipropamid	10 mg/m ³	8 hour TWA
Biological Limit Values:	No biological limit allocated		
Engineering Controls:	<p>Containment and/or segregation is the most reliable technical protection measure if exposure cannot be eliminated. The extent of these protection measures depends on the actual risks in use. Product is used outdoors.</p>		
Personal Protective Equipment:	<p>The use of technical measures should always have priority 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.</p> <p>Respiratory protection: No personal respiratory protective equipment normally required.</p> <p>Eye protection: The product is a slight eye irritant. When opening the container and preparing the spray wear goggles.</p> <p>Hand protection: Wash hands after use.</p> <p>Skin and body protection: Wash hands after use.</p>		

Section 9: PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Off-white to brownish liquid suspension	Boiling Point:	~100°C
Odour:	No distinct odour	Melting Point/Range:	Not relevant
pH:	5 - 9 at 1% w/v	Solubility (water):	Forms suspension in water
Vapour Pressure:	Mandipropamid: 9.4 x 10 ⁻⁷ Pa (20°C - 50°C)	Solubility (other solvents) (at 25°C): (Mandipropamid)	acetone: 300 g/L dichloromethane: 400 g/L ethyl acetate: 120 g/L hexane: 42 mg/L methanol: 66 g/L n-octanol: 4.8 g/L toluene: 29 g/L
Vapour Density:	Not relevant	Density:	1.07 g/cm ³

Flash Point:	Not detectable below 101°C (at 1002.6 mbar) ie, above boiling point	Explosive Properties:	Not explosive.
Upper and Lower Flammable (Explosive) Limits in Air:	Not highly flammable	Oxidising Properties:	Not oxidising
Ignition Temperature:	No ignition below the melting point	Combustibility:	Not a combustible liquid
		Corrosiveness:	Not corrosive to stainless steel, HDPE or PET Corrosive to tin plate, galvanised sheet metal and sheet metal
		Dust explosion class:	Not relevant. Product is a liquid

Section 10: STABILITY AND REACTIVITY

Chemical Stability:	Stable under normal conditions.
Conditions to Avoid:	None known.
Incompatible Materials:	None known.
Hazardous Decomposition Products:	Combustion or thermal decomposition will evolve toxic and irritant vapors.
Hazardous Reactions:	None known. Hazardous polymerisation does not occur.

Section 11: TOXICOLOGICAL INFORMATION

Health Effects from Likely Routes of Exposure:		
Acute:	Oral toxicity:	LOW TOXICITY Tests on rats indicate this product has low toxicity following single doses of undiluted product. LD ₅₀ Rat > 5000 mg/kg (product)
	Dermal toxicity:	LOW TOXICITY Tests on rabbits indicate this product has low toxicity following skin contact with undiluted product. LD ₅₀ Rat > 5000 mg/kg (product)
	Inhalation:	LOW TOXICITY Tests on rats indicate this product has low toxicity due to inhalation of undiluted product. LC ₅₀ Rat, 4h > 4.89 mg/L (product)
	Skin irritation:	NON IRRITANT
	Eye irritation:	SLIGHT IRRITANT
	Sensitisation:	NOT A SENSITISER
Chronic:	Mandipropamid technical has been extensively tested on laboratory mammals and in test-tube systems. No evidence of mutagenic, carcinogenic, teratogenic or reproductive effects was obtained.	

Section 12: ECOLOGICAL INFORMATION

Ecotoxicity:	<p><i>Toxicity to fish:</i> Low toxicity to fish <i>Oncorhynchus mykiss</i> (rainbow trout): LC₅₀ > 100 mg/L, 96 h <i>Cyprinus carpio</i> (carp): LC₅₀ > 100 mg/L, 96h</p> <p><i>Toxicity to daphnia and other aquatic invertebrates:</i> Low toxicity to Daphnia <i>Daphnia magna</i> (Water flea): EC₅₀ > 100 mg/L, 48 h</p> <p><i>Toxicity to algae:</i> Low toxicity to algae <i>Pseudokirchneriella subcapitata</i> (green algae): E_rC₅₀ > 100 mg/L, 72 h E_bC₅₀ > 100 mg/L, 72 h</p> <p><i>Toxicity to soil dwelling organisms:</i> Practically non-toxic to earthworms <i>Eisenia foetida</i> (earthworm): LC₅₀ > 1000 mg/kg, 14 day</p>
Persistence and Degradability:	Mandipropamid is not persistent in soil. Mandipropamid is not readily biodegradable.
Mobility:	Mandipropamid has low mobility in soil.
Environmental Fate (Exposure):	Mandipropamid is hydrolytically stable. Photolysis and aerobic degradation lead to the formation of a large number of degradates. Mandipropamid is readily mineralised through to CO ₂ in active soils. The mineralisation rate is lower in less active soils.
Bioaccumulative Potential:	Mandipropamid has low potential for bioaccumulation

Section 13: DISPOSAL CONSIDERATIONS

<p>Disposal Methods and Containers:</p>	<p>Product: Triple or preferably pressure rinse containers before disposal. Add rinsings to treatment tank. DO NOT dispose of undiluted chemicals on site. If recycling, replace cap and return clean containers to recycler or designated collection point. If not recycling, break, crush or puncture and deliver empty packaging for appropriate disposal to an approved waste management facility. If an approved waste management facility is not available bury the empty packaging 500 mm below the surface in a disposal pit specifically marked and set up for this purpose clear of waterways, desirable vegetation and tree roots, in compliance with relevant Local, State or Territory government regulations. DO NOT burn empty containers or product.</p> <p>Contaminated packaging: Empty remaining contents. Triple or preferably pressure rinse containers before disposal. Add rinsings to treatment tank. DO NOT dispose of undiluted chemicals on-site. Dispose of packaging as above.</p>
<p>Special Precautions for Landfill or Incineration:</p>	<p>Break, crush or puncture and deliver empty packaging for appropriate disposal to an approved waste management facility. If an approved waste management facility is not available bury the empty packaging 500 mm below the surface in a disposal pit specifically marked and set up for this purpose clear of waterways, desirable vegetation and tree roots, in compliance with relevant Local, State or Territory government regulations. DO NOT burn empty containers or product.</p>

Section 14: TRANSPORT INFORMATION

<p>LAND TRANSPORT Not a dangerous good in Australia ADG</p>	
<p>UN Number: None allocated</p>	<p>Packing Group: None allocated</p>
<p>UN Proper Shipping Name: None allocated</p>	<p>Special Precautions for User: None allocated</p>
<p>Class: None allocated</p>	<p>Hazchem Code: None allocated</p>
<p>Subsidiary Risk: None allocated</p>	

<p>SEA TRANSPORT Not a dangerous good for sea transport IMDG</p>	
<p>UN Number: None allocated</p>	<p>Subsidiary Risk: None allocated</p>
<p>UN Proper Shipping Name: None allocated</p>	<p>Packing Group: None allocated</p>
<p>Class: None allocated</p>	<p>Marine Pollutant: None allocated</p>

AIR TRANSPORT IATA - DGR	Not a dangerous good for air transport		
UN Number:	None allocated	Subsidiary Risk:	None allocated
UN Proper Shipping Name:	None allocated	Packing Group:	None allocated
Class:	None allocated		None allocated

Section 15: REGULATORY INFORMATION

APVMA Product Number:	63052
Poisons Schedule (SUSDP):	S5

Section 16: OTHER INFORMATION

Date of preparation or last revision: July 2011
Source of Data: The information provided in this SDS is sourced from Syngenta internal studies which have been conducted according to Regulatory requirements including OECD and CIPAC Guidelines and EC Directives. A comprehensive package of toxicological and environmental data for the active ingredients of this product has been submitted to the government health and environment authorities and has been evaluated by expert toxicologists and environmental scientists.
Note: This product is an agricultural chemical and must, therefore, be used in accordance with the container label directions
CONTACT POINT: Regulatory Affairs Manager, Syngenta Crop Protection Pty Limited (02) 8876 8444
24 HOURS EMERGENCY CONTACT: 1800 033 111
This Material Safety Data Sheet summarises our best knowledge of the health and safety hazard information of the product and how to safely handle and use the product in the workplace. Each user should read this SDS and consider the information in the context of how the product will be handled and used in the workplace including in conjunction with other products. If clarification or further information is needed to ensure that an appropriate risk assessment can be made, the user should contact this company.

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