

Kindred*

FUNGICIDE

Product Registration Number: MAPP 13891.

An emulsifiable concentrate containing 350 g/litre (33.2%w/w) meptyldinocap.

A protectant fungicide for the control of POWDERY MILDEW in GRAPES.

The (COSHH) Control of Substances Hazardous to Health Regulations may apply to the use of this product at work.



1 Litre e

READ DIRECTIONS FOR USE ON ATTACHED LEAFLET. PROTECT FROM FROST.

Manufactured and Registered by:

 **Dow AgroSciences**

Dow AgroSciences Limited
Latchmore Court, Brand Street,
Hitchin, Hertfordshire. SG5 1NH.
Telephone: Hitchin (01462) 457272
Fax: (01462) 426605

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Distributed by:

Landseer
LIMITED

Landseer Limited
Lodge Farm, Goat Hall Lane,
Galleywood, Chelmsford, Essex CM2 8PH
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Trademark of Dow AgroSciences LLC.

This label is compliant with the
CPA Voluntary Initiative Guidance.



HARMFUL



DANGEROUS FOR THE ENVIRONMENT

WEAR SUITABLE GLOVES.
AVOID CONTACT WITH SKIN.
IN CASE OF CONTACT WITH EYES, RINSE IMMEDIATELY with plenty of water and seek medical advice.
IF SWALLOWED, seek medical advice (show label where possible).
THIS MATERIAL AND ITS CONTAINER MUST BE DISPOSED OF IN A SAFE WAY.
USE APPROPRIATE CONTAINMENT TO AVOID ENVIRONMENTAL CONTAMINATION.
To avoid risks to man and the environment, comply with the instructions for use.

FLAMMABLE.
HARMFUL IF SWALLOWED.
IRRITATING TO EYES AND SKIN.
MAY CAUSE SENSITISATION BY SKIN CONTACT.
VAPOURS MAY CAUSE DROWSINESS AND DIZZINESS.
VERY TOXIC TO AQUATIC ORGANISMS, MAY CAUSE LONG-TERM ADVERSE EFFECTS IN THE AQUATIC ENVIRONMENT.

IMPORTANT INFORMATION FOR USE ONLY AS A HORTICULTURAL FUNGICIDE

Crops	Maximum Individual Dose (litres product per hectare)	Maximum Number of Treatments	Latest Time of Application
Table and wine grapes	0.6	4 per annum	21 days before harvest

READ THE LABEL BEFORE USE. USING THIS PRODUCT IN A MANNER THAT IS INCONSISTENT WITH THE LABEL MAY BE AN OFFENCE. FOLLOW THE CODE OF PRACTICE FOR USING PLANT PROTECTION PRODUCTS.

SAFETY PRECAUTIONS

Operator protection:

WEAR SUITABLE PROTECTIVE CLOTHING (COVERALLS), SUITABLE PROTECTIVE GLOVES AND FACE PROTECTION (FACESHIELD) when handling the concentrate.
WEAR SUITABLE PROTECTIVE CLOTHING (COVERALLS) AND SUITABLE PROTECTIVE GLOVES when applying by broadcast air assisted equipment.
TAKE OFF immediately all contaminated clothing.
WHEN USING, DO NOT EAT, DRINK OR SMOKE.
DO NOT BREATHE SPRAY.
WASH HANDS AND EXPOSED SKIN before eating, drinking or smoking, and after work.

Environmental protection:

DO NOT CONTAMINATE WATER with the product or its container. Do not clean application equipment near surface water. Avoid contamination via drains from farmyards and roads.
DO NOT ALLOW DIRECT SPRAY from broadcast air-assisted sprayers to fall within 50 metres of the top of the bank of a static or flowing waterbody unless a Local Environment Risk Assessment for Pesticides (LERAP) permits a narrower buffer zone, or within 5 metres of the top of a ditch which is dry at the time of application. Aim spray away from water.

Broadcast
Air Assisted
LERAP

This product qualifies for inclusion within the Local Environment Risk Assessment for Pesticides (LERAP) scheme. Before each spraying operation from a broadcast air-assisted sprayer, either a LERAP must be carried out in accordance with PSD's published guidance or the statutory buffer zone must be maintained. The results of the LERAP must be recorded and kept available for inspection for three years.

Storage and disposal:

KEEP AWAY FROM FOOD, DRINK AND ANIMAL FEEDING STUFFS.
KEEP OUT OF REACH OF CHILDREN.
KEEP IN ORIGINAL CONTAINER, tightly closed, in a safe place.
WASH OUT CONTAINER THOROUGHLY and dispose of safely.
DO NOT RE-USE CONTAINER for any purpose.

DIRECTIONS FOR USE

IMPORTANT: This information is approved as part of the Product Label. All instructions within this section must be read carefully in order to obtain safe and successful use of this product.

GENERAL INFORMATION

KINDRED* is a protectant fungicide for the control of grape powdery mildew. A protective film should be maintained on the leaf at all times. KINDRED must be applied before powdery mildew becomes established otherwise the disease may not be controlled.

WARNING

KINDRED may cause damage to some varieties of grapevines; this is most likely under conditions of very high and fluctuating temperatures.

RESISTANCE MANAGEMENT

Meptyldinocap is a dinitrophenol fungicide with multisite activity which has shown no resistance to date. To reduce the possibility of the development of resistance developing:

- Carry out careful monitoring. Target early infestations and apply when the disease is first seen.
- Apply KINDRED in rotation or tank mixture with products with a different mode of action.
- Do not use reduced label rates.

WATER VOLUME

Low Volume Recommendations

Apply in a minimum of 250 litres/hectare. Where necessary, use higher water volumes to achieve good coverage.

High Volume Recommendations

Apply in a maximum of 1000 litres/hectare.

MIXING

Pour the required amount of KINDRED into a partially filled spray tank and top up with the spray machine agitation working. Maintain agitation during crop spraying and stoppages.

GRAPES

In any one season the total amount of product applied should not exceed 2.4 litres/hectare, which is equivalent to 4 sprays at the rate of 0.6 litres/hectare. The maximum number of treatments is 4 per annum.

Disease	Rate of Use	Timing
Grape powdery mildew	Low Volume 0.6 litres/hectare	Apply just before flowering and thereafter at 10 day intervals
	High Volume 0.6 litres/1000 litres	

Harvest Interval: 21 days

DOW AGROSCIENCES CONDITIONS OF SUPPLY

All goods supplied by us are of high grade and we believe them to be suitable but, as we cannot exercise control over their storage, handling, mixing or use, or the weather conditions before, during or after application which may affect the performance of the goods, all conditions and warranties, statutory or otherwise, as to the quality or fitness for any purpose of our goods are excluded. No responsibility will be accepted by us or re-sellers for any failure in performance, damage or injury whatsoever arising from their storage, handling, application or use. These conditions cannot be varied by our staff or agents whether or not they supervise or assist in the use of such goods.

*Trademark of Dow AgroSciences LLC

SAFETY DATA SHEET

This safety data sheet does not form part of the label approved under the Plant Protection Product Regulations 1995. Following the instructions on the pesticide label for the specified uses should ensure that the product is used safely and efficaciously for those uses.

1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

Dow AgroSciences Limited

Latchmore Court
Brand Street
Hitchin
Herts SG5 1NH
+44 (0)1553 761 251

Emergency Telephone Number:

Product Name: **KINDRED FUNGICIDE**

LV70: 106636

Issue Date: Jul.05

Ref: PS010

Revised: New

For questions about this SDS, contact: SDSQuestion@dow.com

2. HAZARDS IDENTIFICATION

Flammable. Harmful if swallowed. Irritating to eyes and skin. May cause sensitisation by skin contact. Very toxic to aquatic organisms, may cause long-term effects in the aquatic environment. Vapours may cause drowsiness and dizziness.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Dangerous components (see section 16 for complete R-phrases):

			CAS	EC No
DE-126	35-37 %	Xi,N; R10-43-50/53	131-72-6	
Aromatic hydrocarbon solvent	55-65 %	Xn; R65, N; R51/53, R66-67	064742-94-5	265-198-5
Surfactant	<10 %	Xi,N; R36/38-50/53		
Inert ingredients	Balance			
Composition Code	GF-1478			

4. FIRST-AID MEASURES

Never give fluids or induce vomiting if patient is unconscious or is having convulsions.

Ingestion

Do not induce vomiting. Drink large amounts of water and call a physician. The decision of whether to induce vomiting or not should be made by a physician.

Eye Contact

Immediately flush eyes with water; remove contact lenses, if present, after the first 5 minutes, then continue flushing eyes for at least 15 minutes. Obtain medical attention without delay, preferably from an ophthalmologist.

Skin Contact

Immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing. Seek medical attention if symptoms occur or irritation persists. Wash clothing before re-use.

Inhalation

Remove to fresh air. Consult a physician.

Note to Physician

Supportive care. Treatment based on judgement of physician in response to symptoms of patient. If lavage is performed, suggest endotracheal and/or oesophageal control. Danger from lung aspiration must be weighed against toxicity when considering emptying the stomach.

5. FIRE-FIGHTING MEASURES

Extinguishing Media

Water fog or fine spray. Carbon dioxide. Dry chemical powder. Foam.

Hazardous Combustion Products

During a fire, smoke may contain the original material in addition to combustion products of varying composition which may be toxic and/or irritating.

Combustion products include: Nitrogen oxides.

Protection of Firefighters

Wear protective clothing and use self-contained breathing apparatus.

Additional Information

Cool containers exposed to fire or heat with water spray. Contain run-off to prevent entry into water or drainage systems. Avoid breathing smoke. Work upwind of any spill.

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions

Wear appropriate safety clothing and eye/face protection (see Section 8). Remove contaminated clothing immediately, wash skin area with soap and water, and launder clothing before re-use or dispose of properly.

Environmental Precautions

Do not wash into sewers or into any body of water. Advise water authority if spillage has entered water course or drainage system.

Methods of Cleaning Up

Soak up with sand or other non-combustible absorbent material and place into containers for disposal. For large spills, barricade area and consult manufacturer. If further assistance is required, telephone the emergency contact number.

Additional Information

Eliminate all ignition sources.

7. HANDLING AND STORAGE

Handling

Containers should be grounded before product is transferred to reduce risk of spark by static electricity. Use good personal hygiene. Do not consume or store food in the work area. Wash hands and exposed skin before eating, drinking or smoking and after work.

Storage

Product should be stored in compliance with local regulations. Store in a cool, dry, well-ventilated place in the original container. Store at below 32 deg.C. Do not store near food, drink, animal feeding stuffs, pharmaceuticals, cosmetics or fertilisers. Keep out of reach of children.

Additional Information

Containers, even those that have been emptied, can contain vapours. Do not cut, drill, grind, weld or perform similar operations on or near empty containers.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure Guidelines

None established.

Engineering Controls

Provide general and/or local exhaust ventilation to control airborne levels below the exposure guidelines.

Respiratory Protection

For most conditions, no respiratory protection should be needed. However, when airborne exposure guidelines and/or comfort levels may be exceeded use an approved air-purifying respirator. For emergency conditions, use an approved positive-pressure self-contained breathing apparatus.

Hand/Skin Protection

For brief contact, no precautions other than clean body-covering clothing and chemical resistant gloves should be needed. Use chemical resistant gloves classified under standard EN 374: Protective gloves against chemicals and micro-organisms. Examples of preferred glove barrier materials include: Nitrile. Examples of acceptable glove barrier materials include: Neoprene. Polyvinyl chloride ("PVC" or "vinyl"). Avoid gloves made of: Natural rubber ("latex").

When prolonged or frequently repeated contact may occur, a glove with a protection class of 5 or higher is recommended. When only brief contact is expected, a glove with a protection class of 3 or higher is recommended.

NOTICE: The selection of a specific glove for a particular application and duration of use in a workplace should also take into account all requisite workplace factors such as, but not limited to: Other chemicals which may be handled, physical requirements (cut/puncture protection, dexterity, thermal protection), as well as the instructions/specifications provided by the glove supplier.

When prolonged or frequently repeated contact could occur, use protective clothing impervious to this material. For emergency conditions: Use protective clothing impervious to this material. Selection of specific items will depend on operation.

Eye/Face Protection

Use safety glasses. Where contact with the liquid is likely, chemical goggles are recommended.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	: liquid
Colour	: brown
Odour	: aromatic
Rel. density (water=1)	: 0.97 g/cm ³ (20 deg.C)
Flash point	: 53.6 deg.C
Autoignition temperature	: 340 deg.C
Water solubility	: emulsifiable
Viscosity	: 306 mm ² /s (40 deg.C)
Surface tension	: 30.0 mN/m (25 deg.C) (neat)
pH	: 4.8 (1 % aq.sol.)
Explosive properties	: not explosive
Oxidising properties	: non oxidising

10. STABILITY AND REACTIVITY

Chemical Stability

Is stable under normal storage conditions.

Conditions to Avoid

Avoid prolonged heating above 32 deg.C.

Materials to Avoid

Avoid contact with: Acids. Bases. Amines. Iron. Halogens.

Hazardous Decomposition Products

None under normal conditions of storage and use.

11. TOXICOLOGICAL INFORMATION

Ingestion

Moderate toxicity if swallowed. The oral LD50 for female rats is >500 <2000 mg/kg.

Skin Contact

The dermal LD50 for rats is >5000 mg/kg.
Prolonged skin contact is unlikely to result in absorption of harmful amounts.
Brief contact may cause severe skin irritation with pain and local redness.

Sensitisation

Skin contact may cause an allergic skin reaction.

Eye Contact

May cause moderate eye irritation.

Inhalation

No adverse effects anticipated by this route of exposure incidental to proper handling.

Additional Information

Not carcinogenic. Not mutagenic. Not toxic for reproduction.

12. ECOLOGICAL INFORMATION

Persistence and Degradability

Assessment largely or completely based on data for active ingredient.

Undergoes microbial degradation in the soil. Half-life in soils is dependent on soil type and conditions and is approximately 4-24 days.

Aquatic Toxicity

Based on data for a similar formulation.

Material is very toxic to fish on an acute basis (LC₅₀ <1 mg/L).

Material is very toxic to aquatic invertebrates on an acute basis (EC₅₀ <1 mg/L).

Material is toxic to algae (1 mg/l <LC₅₀ <10 mg/l).

Avian Toxicity

Assessment largely or completely based on data for active ingredient.

Material is practically non-toxic to birds on an acute basis (LD₅₀ >2000 mg/kg).

Dietary LC50 for mallard duck is 2024 mg/kg of diet.

Dietary LC₅₀ for bobwhite (Colinus virginianus) is 2298 mg/kg diet.

Additional Information

LD50 for bees is 84.8 microgram/bee.

13. DISPOSAL CONSIDERATIONS

Very toxic to aquatic organisms. Do not contaminate ponds, waterways or ditches with chemical or used container. The preferred options are to send to licensed reclaimer or to permitted incinerators. Any disposal practice must be in compliance with all local and national laws and regulations.

14. TRANSPORT INFORMATION

Road & Rail

Proper shipping name : FLAMMABLE LIQUID,N.O.S. (DE-126 and aromatic hydrocarbon)

Truck/Rail ADR/RID : 3 Label: 3

Classification Code : F1

Packing Group : III

Kemler Code : 30 UN Number: 1993

Tremcard Nr. CEFIC : 30GF1-III

Sea

Proper shipping name : FLAMMABLE LIQUID,N.O.S. (DE-126 and aromatic hydrocarbon)

Sea - IMO/IMDG Class : 3 UN Nr : 1993 Label : 3

Packing Group : III EMS : F-E,S-E

Marine Pollutant : Y (Y/N)

Air

Proper shipping name : FLAMMABLE LIQUID,N.O.S. (DE-126 and aromatic hydrocarbon)

Air-ICAO/IATA Class : 3 UN Nr : 1993 Label : 3

Sub Class :

Packing Group : III Pack Instr. Passenger : 309

Pack Instr. Cargo : 310

Remarks : Sample shipment not allowed by mail.

15. REGULATORY INFORMATION

Hazard Symbol : Xn - Harmful
N - Dangerous for the Environment

Risk Phrases : Flammable (R10).
Harmful if swallowed (R22).
Irritating to eyes and skin (R36/38).
May cause sensitisation by skin contact (R43).
Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment (R50/53).
Vapours may cause drowsiness and dizziness (R67).

Safety Phrases : Avoid contact with skin (S24).
In case of contact with eyes, rinse immediately with plenty of water and seek medical advice (S26).
This material and its container must be disposed of in a safe way (S35).
Wear suitable gloves (S37).
If swallowed, seek medical advice immediately and show this container or label(S46).
Use appropriate containment to avoid environmental contamination (S57).

Refer to the Product Label for full local Regulatory Authority label precautions.

16. OTHER INFORMATION

Risk-phrases in Section 3

R10 - Flammable.

R36/38 - Irritating to eyes and skin.

R43 - May cause sensitisation by skin contact.

R50/53 - Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

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

R65 - Harmful: may cause lung damage if swallowed.

R66 - Repeated exposure may cause skin dryness or cracking.

R67 - Vapours may cause drowsiness and dizziness.

The information herein is given in good faith and to the best of our knowledge bit no warranty, express or implied is made

SPECIMEN

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BLANK INTENTIONALLY**

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1 Litre e

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PROTECT FROM FROST.**

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IF SWALLOWED, seek medical advice (show label where possible).

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IMPORTANT INFORMATION

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Crops	Maximum Individual Dose (litres product per hectare)	Maximum Number of Treatments	Latest Time of Application
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SAFETY PRECAUTIONS

Operator protection:

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WEAR SUITABLE PROTECTIVE CLOTHING (COVERALLS) AND SUITABLE PROTECTIVE GLOVES when applying by broadcast air assisted equipment.

TAKE OFF immediately all contaminated clothing.

WHEN USING, DO NOT EAT, DRINK OR SMOKE.

DO NOT BREATHE SPRAY.

WASH HANDS AND EXPOSED SKIN before eating, drinking or smoking, and after work.

Environmental protection:

DO NOT CONTAMINATE WATER with the product or its container. Do not clean application equipment near surface water. Avoid contamination via drains from farmyards and roads.

DO NOT ALLOW DIRECT SPRAY from broadcast air-assisted sprayers to fall within 50 metres of the top of the bank of a static or flowing waterbody unless a Local Environment Risk Assessment for Pesticides (LERAP) permits a narrower buffer zone, or within 5 metres of the top of a ditch which is dry at the time of application.

Aim spray away from water.

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WASH OUT CONTAINER THOROUGHLY and dispose of safely.

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