



Product Registration Number: MAFF 09396

An oil in water emulsion containing 200g/litre (20% w/w) myclobutanil and 103g/litre cyclohexadone

A systemic fungicide for the control of Apple Scab, Pear Scab and Powdery Mildew in Apples and Pears. American Gooseberry Mildew in Blackcurrants and Gooseberries. Powdery Mildew in Strawberries and Powdery Mildew, Blackspot and Rust on Outdoor Ornamental Plants

Pack size: 1 Litre

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

COMPLIANCE WITH THE FOLLOWING CONDITIONS OF USE AND ALL SAFETY PRECAUTIONS MARKED # IS A LEGAL REQUIREMENT FOR USE ONLY AS AN HORTICULTURAL FUNGICIDE

Crops/Situations:	Apple, pear, blackcurrant, gooseberry, strawberry, ornamental plant production
Maximum Individual Dose:	}
Maximum Number of Treatments:	} Full details are given in the Statutory Area on the attached leaflet
Latest Time of Application:	}
Other Specific Restrictions:	}

READ ALL OTHER SAFETY PRECAUTIONS AND DIRECTIONS FOR USE BEFORE USE.

This label is compliant with the CPA Voluntary Initiative Guidance



PROTECT FROM FROST

READ DIRECTIONS FOR USE ON ATTACHED LEAFLET:

SAFETY PRECAUTIONS

Operator protection:

#Engineering control of operator exposure must be used where reasonably practicable in addition to the following personal protective equipment:

#WEAR SUITABLE PROTECTIVE GLOVES when handling the concentrate.

#WEAR SUITABLE PROTECTIVE CLOTHING (COVERALLS, HOOD) AND SUITABLE PROTECTIVE GLOVES when applying via air assisted spraying equipment.

#WEAR SUITABLE PROTECTIVE CLOTHING (COVERALLS) AND SUITABLE PROTECTIVE GLOVES when applying via hand-held equipment.

#However, engineering controls may replace personal protective equipment if a COSHH assessment shows they provide an equal or higher standard of protection

WASH CONCENTRATE from skin or eyes immediately.

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

Environmental protection:

DO NOT CONTAMINATE SURFACE WATERS OR DITCHES with chemical or used container.

Storage and Disposal:

RINSE CONTAINER THOROUGHLY by using an integrated pressure rinsing device or manually rinsing three times. Add washings to sprayer at time of filling and dispose of safely.



HARMFUL



**DANGEROUS
FOR THE
ENVIRONMENT**

HARMFUL: MAY CAUSE LUNG DAMAGE IF SWALLOWED.

POSSIBLE RISK OF HARM TO THE UNBORN CHILD.

TOXIC TO AQUATIC ORGANISMS, MAY CAUSE LONG-TERM ADVERSE EFFECTS IN THE AQUATIC ENVIRONMENT.

WEAR SUITABLE PROTECTIVE CLOTHING AND GLOVES.

AVOID CONTACT WITH EYES.

KEEP OUT OF REACH OF CHILDREN.

KEEP AWAY FROM FOOD, DRINK AND ANIMAL FEEDING STUFFS.

THIS MATERIAL AND ITS CONTAINER MUST BE DISPOSED OF IN A SAFE WAY.

IF SWALLOWED, DO NOT INDUCE VOMITING: SEEK MEDICAL ADVICE IMMEDIATELY AND SHOW THIS CONTAINER OR LABEL.

To avoid risks to man and the environment, comply with the instructions for use.

Approval Holder:

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*Trademark of Dow AgroSciences LLC

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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.

COMPLIANCE WITH THE FOLLOWING CONDITIONS OF USE AND ALL SAFETY PRECAUTIONS MARKED # IS A LEGAL REQUIREMENT FOR USE ONLY AS AN HORTICULTURAL FUNGICIDE

Crop/Situations	Maximum Individual Dose	Maximum Total Dose	Latest time of Application
Apple, Pear	0.45 litres product/ha	4.5 litres product/ha/annum	14 days before harvest (see other Specific Restrictions)
Blackcurrant, Gooseberry	0.45 litres product/ha	2.7 litres product/ha/annum	14 days before harvest (see other Specific Restrictions)
Strawberry	0.45 litres product/ha	2.7 litres product/ha/annum	3 days before harvest (see other Specific Restrictions)
Ornamental plant production	See Other Specific Restrictions	-	

Other Specific Restrictions:

The following minimum intervals must be observed between applications at the following rates;

Up to and including 0.23 litres product/hectare – 7 days

Greater than 0.23 litres product/hectare and up to and including 0.33 litres product/hectare 8 days.

Greater than 0.33 litres product/hectare and up to and including 0.45 litres product/hectare 11 days.

For application in ornamental plant production a maximum concentration of 225 ml of product/750 litres of water must not be exceeded

READ ALL OTHER SAFETY PRECAUTIONS AND DIRECTIONS FOR USE BEFORE USE

TAINT TESTING

Taint tests have shown that SYSTHANE* 20EW does not taint apple and blackcurrant, but growers should consult processors before use on any other crop.

RESISTANCE

Certain weeds, insects or fungi may develop resistance to Landseer products. Since such circumstances are beyond our control, Landseer Limited can accept no responsibility for any loss or damage whatsoever as a result.

MIXING

SYSTHANE 20EW Alone: Shake the container well before use. Partially fill spray tank with water and start agitation. Pour required amount of SYSTHANE 20EW into the tank and fill to required level.

Maintain agitation during mixing and loading and until spraying is complete.

Tank mixing with Dithianon Flowable: Pour the SYSTHANE 20EW into the partially filled spray tank as described above. Shake the Dithianon Flowable container well before use and pour the required amount into the partially filled spray tank. Agitate whilst topping up the tank and continue agitation before and during spraying.

Tank mixing with Karamate Dry Flo or PP Captan 80 WG: Pour the SYSTHANE 20EW into the partially filled spray tank as described above. Remove the filter basket and pour the required amount of Karamate Dry Flo or PP Captan 80 WG directly into spray tank. DO NOT add the Karamate Dry Flo or PP Captan 80 WG in a sudden large quantity. Agitate whilst topping up the tank and continue agitation before and during spraying.

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APPLES and PEARS

SYSTHANE 20EW is a systemic fungicide with protectant and curative activity against apple scab (*Venturia inaequalis*), apple powdery mildew (*Podosphaera leucotricha*) and pear scab (*Venturia pirina*).

SYSTHANE 20EW is most effective when used as part of a routine preventative spray programme from bud burst to the onset of petal fall.

SYSTHANE 20EW is safe to use during flowering.

From the onset of petal fall SYSTHANE 20EW should be tank-mixed with low rates of protectant fungicides to enhance fruit scab control. From mid June, SYSTHANE 20EW can be applied alone for the control of secondary mildew.

SYSTHANE 20EW and SYSTHANE 20EW + Karamate Dry Flo mixtures are safe to use on all the main commercial varieties of apples and pears grown in the UK. For Dithianon Flowable and PP Captan 80 WG mixtures with SYSTHANE 20EW please consult the PP Captan 80 WG or Dithianon Flowable labels for details of varietal restrictions.

SPRAY TIMING AND RATES OF USE

To control leaf scab and reduce the development of powdery mildew from primary infections, apply SYSTHANE 20EW from bud burst to the onset of petal fall. To improve control of fruit scab after the onset of petal fall, tank mix SYSTHANE 20EW with either Karamate Dry Flo, Dithianon Flowable or PP Captan 80 WG, (see COMPATIBILITY and MIXING).

Minimum spray interval	Bud burst to onset of petal fall	From onset of petal fall		
		Tank mix the listed rates of SYSTHANE 20EW with either:		
	SYSTHANE 20EW	Dithianon Flowable	PP Captan 80WG	Karamate Dry Flo
7 days	0.23 litre	0.3 litre	0.6 kg	1.5 kg
8-10 days	0.33 litre	0.4 litre	0.85 kg	2.1 kg
11-14 days	0.45 litre	0.6 litre	1.2 kg	3.0 kg

If the above spraying intervals have been unavoidably extended, the next spray should be at the 11-14 day rate(s) to maximise the curative activity of SYSTHANE 20EW.

In periods of rapid growth or high disease pressure, SYSTHANE 20EW and partner fungicides should be used at 7 day instead of 8 -10 or 11-14 day intervals.

APPLICATION

Volume	Minimum/early season - 200 litres/ha Minimum/trees in full leaf - 500 litres/ha
Maximum total dose	4.5 litres/ha/annum
Latest time of application	14 days before harvest

BLACKCURRANTS AND GOOSEBERRIES AND STRAWBERRIES

BLACKCURRANTS AND GOOSEBERRIES

SYSTHANE 20EW controls American Powdery Mildew.

SYSTHANE 20EW is most effective when used as part of a routine preventative spray programme from just before the first signs of mildew infection up to two weeks before picking if necessary. Post-harvest treatments may be applied to reduce over-wintering inoculum.

STRAWBERRIES

SYSTHANE 20EW controls Strawberry Powdery Mildew.

SYSTHANE 20EW should be applied pre-harvest, beginning at or just prior to first flower and thereafter at the recommended spray intervals up to 3 days before picking. Post-harvest sprays may be required where mildew is present and likely to be damaging (especially mildew susceptible varieties).

This will help to produce vigorous growth and reduce the amount of over-wintering inoculum.

SPRAY TIMING AND RATES OF USE

Spray interval	SYSTHANE 20EW
7 days	0.23 litres product/ha
8-10 days	0.33 litres product/ha
11-14 days	0.45 litres product/ha

In periods of rapid growth or high disease pressure conditions SYSTHANE 20EW should be used at 7 day instead of 8 -10 or 11-14 day intervals.

APPLICATION

Volume	Minimum/early season - 200 litres/ha Minimum/bushes or plants in full leaf - 500 litres/ha
Maximum total dose	2.7 litres product/ha/annum
Latest time of application	Blackcurrants and gooseberries - 14 days before harvest Strawberries - 3 days before harvest

OUTDOOR ROSES AND ORNAMENTALS

SYSTHANE 20EW controls Powdery Mildew, Blackspot and Rust.

SPRAY TIMING

Preventative Spraying:

Disease	Application	
	First	Further
Powdery Mildew, Blackspot, Rust	In early May	Every 14 days

OR

Disease Control Spraying: Recommended where blackspot and/or rust were present in the previous year

Disease	Application	
	First	Further
Powdery Mildew High and low risk	At first sign of disease	Every 14 days
Blackspot High risk Low risk	As soon as leaf buds burst At first sign of disease	After 7 days then every 14 days Every 14 days
Rust High risk Low risk	At first sign of disease At first sign of disease	After 7 days then every 14 days Every 14 days

RATE OF USE AND APPLICATION METHOD

Apply SYSTHANE 20EW at a rate of 0.225 litres/ha in 750 litres of water. Spray foliage to run-off.

COMPATIBILITY

SYSTHANE 20EW is compatible with Karamate Dry Flo, PP Captan 80 WG and Dithianon Flowable.

For compatibility information on other products please contact your dealer or advisor.

TRADEMARK ACKNOWLEDGEMENTS

SYSTHANE and KARAMATE are trademarks of Dow AgroSciences LLC.

Dithianon Flowable is a trademark of BASF plc.

PP Captan 80 WG is a product of Tomen (UK) plc.

Landseer is a trademark of Landseer Limited.

Landseer Limited will be under no liability for any loss or damage resulting from the manner of use of their products other than in accordance with the label recommendations which may be not be varied, amended or added to except in writing by Landseer Limited. This label was originated in 2005. Should the product be purchased for use in subsequent years, please check with your supplier that no changes have been made in the recommendations since the label was printed.

SAFETY DATA SHEET

This safety data sheet does not form part of the label approved under the Control of Pesticides Regulations 1986. Following the instructions on the pesticide label for the specified uses should ensure that the product is used safely and efficaciously for those uses.

Product Name: **SYSTHANE 20EW FUNGICIDE**

LV70: 102194

Issue Date: May 05

Ref: PS 08

2. COMPOSITION/INFORMATION ON INGREDIENTS

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

			CAS	EC No
Myclobutanil	19-20 %	Xn, N; R22-36-51/53-63	88671-89-0	
Cyclohexanone	10-11 %	Xn; R20, R10	000108-94-1	203-631-1
Aromatic hydrocarbon solvent		Xn, R65, N;R51-53,R66	064742-94-5	265-198-5
plus Inert ingredients	Balance			
	GF1317			

3. HAZARDS IDENTIFICATION

Toxic to aquatic organisms. May cause long-term adverse effects in the aquatic environment. Possible risk of harm to the unborn child.

4. FIRST-AID MEASURES

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

Ingestion

Do not induce vomiting. Call a physician and/or transport to emergency facility immediately. The decision of whether to induce vomiting or not should be made by a physician.

Eye Contact

Flush eyes thoroughly with water for several minutes. Remove contact lenses after initial 1-2 minutes and continue flushing for several additional minutes. If effects occur, consult a physician preferably an ophthalmologist.

Skin Contact

Wash off in flowing water or shower, use soap if available. Consult a physician if irritation develops.

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 fire extinguishers. 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: Hydrogen chloride. Hydrogen cyanide.

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 runoff 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 reuse 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

Ventilate area of leak or spill. Do not breathe vapours.

7. HANDLING AND STORAGE

Handling

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. Do not store near food, drink, animal feeding stuffs, pharmaceuticals, cosmetics or fertilisers. Keep out of reach of children.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure Guidelines

Myclobutanil: Dow AgroSciences recommendation is 1.0 mg/m³.

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 EN374; Protective gloves against chemicals and micro-organisms. Examples of preferred glove barrier materials include ; Nitrile. Examples of acceptable glove barrier materials include: Polyvinyl chloride ("PVC" or "vinyl"). Neoprene. 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 (breakthrough time greater than 240 minutes according to EN 374) is recommended. When only brief contact is expected a glove with a protection class of 3 or higher (breakthrough time greater than 60 minutes according to EN 374) 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	: white
Odour	: ester-like
Rel. density (water=1)	: 1.03 g/cm ³
Rel. vapour density (air=1)	: 5.2 (solvent)
Melting point/range	: same as water
Boiling point/range	: same as water
Flash point	: 111 deg.C (solvent)
pH	: 7-9
Water solubility	: disperses
Viscosity	: 700-1200 mPas

10. STABILITY AND REACTIVITY

Chemical Stability

Is stable under normal storage conditions.

Conditions to Avoid

Avoid high temperatures (at or near flash point), open flame, sparks and direct sunlight.

Materials to Avoid

Strong oxidising agents.

Hazardous Decomposition Products

Hydrogen chloride.

11. TOXICOLOGICAL INFORMATION

Ingestion

Low toxicity if swallowed. The oral LD₅₀ for rats is > 2000 mg/kg.

Skin Contact

The dermal LD₅₀ for rats is > 2000 mg/kg. Prolonged skin contact is unlikely to result in absorption of harmful amounts. Essentially non-irritating to the skin.

Sensitisation

Non-sensitising to guinea pig skin.

Eye Contact

May cause moderate eye irritation.

Inhalation

The LC₅₀ for inhalation in rats is > 5mg/l. No adverse effects anticipated by this route of exposure incidental to proper handling.

Additional Information

Not carcinogenic. Not mutagenic.

Myclobutanil: This substance is classified as toxic for reproduction category 3 in the EC.

12. ECOLOGICAL INFORMATION

Persistence and Degradability

Assessment largely or completely based on data for active ingredient. Half-life in soils is dependent on soil type and conditions and is approximately 66 days.

Aquatic Toxicity

Based on data for the formulation.

Material is harmful to fish on an acute basis (10 mg/L < LC50 < 100 mg/L).

Material is toxic to aquatic invertebrates on an acute basis (1 mg/L < EC50 < 10 mg/L).

Material is toxic to algae (1 mg/l < IC50 < 10 mg/l).

Avian Toxicity

Assessment largely or completely based on data for active ingredient. Acute oral LD50 for bobwhite (*Colinus virginianus*) is 510 mg/kg.

Additional Information

Assessment largely or completely based on data for active ingredient. LD50 for bees is > 362 microgram/bee.

13. DISPOSAL CONSIDERATIONS

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: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.
(Myclobutanil)

Truck/Rail ADR/RID:	9	Label :	9
Classification Code:	M6		
Packing Group:	III		
Kemler Code:	90	UN Number:	3082
Tremcard Nr. CEFIC:	90GM6-III		

Sea

Proper shipping name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.
(Myclobutanil)

Sea - IMO/IMDG Class:	9	UN Nr: 3082	Label: 9
Packing Group:	III	EMS :	F-A,S-F
Marine Pollutant:	Y (Y/N)		

Air

Proper shipping name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.
(Myclobutanil)

Air-ICAO/IATA Class:	9	UN Nr: 3082	Label: 9
Sub Class :			
Packing Group:	III	Pack Instr. Passenger :	914
		Pack Instr. Cargo :	914

Remarks: Sample shipment not allowed by mail

15. REGULATORY INFORMATION

Hazard Symbol : Xn – Harmful

N – Dangerous for the Environment

Risk Phrases : Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment. (R51/53)

Possible risk of harm to the unborn child (R63)

Safety Phrases : Keep out of reach of children (S2)

This material and its container must be disposed of in a safe way (S35)

Wear suitable protective clothing and gloves (S36/37).

Use appropriate containment to avoid environmental contamination(S57)

Refer to Product Label for full Local Regulatory Authority label precautions.

16. OTHER INFORMATION

Risk-phrases in Section 2

R10 - Flammable

R20 . Harmful by inhalation

R22 . Harmful 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.

R66 - Repeated exposure may cause skin dryness or cracking.

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