

Indar* 5EW Fungicide

Product Registration Number: MAFF 09518.

An emulsion in water formulation containing 50 g/litre (5% w/w) fenbuconazole in cyclohexanone.

A systemic fungicide for the control of APPLE SCAB, PEAR SCAB, and the reduction of APPLE POWDERY MILDEW in APPLES and PEARS.

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



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

5 Litre e

Approval holder:

Dow AgroSciences Limited

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*Trademark of Dow AgroSciences LLC

Batch number:

Date of manufacture:



This label is compliant with the CPA Voluntary Initiative Guidance.



IRRITANT

IRRITATING TO EYES.

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

KEEP OUT OF REACH OF CHILDREN.

**IN CASE OF CONTACT WITH EYES, RINSE IMMEDIATELY WITH PLENTY OF
WATER AND SEEK MEDICAL ADVICE.**

**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.



**DANGEROUS FOR
THE ENVIRONMENT**

IMPORTANT INFORMATION

FOR USE ONLY AS AN HORTICULTURAL FUNGICIDE

Crops/Situations:

Apple, pear

Maximum Individual Dose:

1.4 litres product/ha

Maximum Total Dose:

14 litres product/ha per annum

Latest Time of Application:

28 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:

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

**WEAR SUITABLE PROTECTIVE GLOVES AND FACE
PROTECTION (FACESHIELD)** when handling the concentrate.

WEAR SUITABLE PROTECTIVE GLOVES when handling contaminated surfaces and freshly treated material.

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

WHEN USING DO NOT EAT, DRINK OR SMOKE.

WASH CONCENTRATE from skin or eyes immediately.

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

Consumer protection:

**DO NOT HARVEST CROPS FOR HUMAN OR ANIMAL
CONSUMPTION FOR AT LEAST 4 WEEKS AFTER LAST
APPLICATION.**

Environmental protection:

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

Storage and disposal:

**KEEP AWAY FROM FOOD, DRINK AND ANIMAL
FEEDING STUFFS.**

EMPTY CONTAINER COMPLETELY and dispose of safely.

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.

PROBLEMS CONTROLLED

INDAR* 5EW is a systemic fungicide with protectant and curative activity.

INDAR 5EW will give protection against apple scab (*Venturia inaequalis*), pear scab (*Venturia pirina*) and provide a reduction of apple powdery mildew (*Podosphaera leucotricha*).

CROPS

INDAR 5EW alone or in tank mixture with KARAMATE* DRY FLO is safe to use on all the main commercial varieties of apples and pears grown in the UK.

For use in mixture with Dithianon Flowable or PP Captan 80 WG please consult the Dithianon Flowable or PP Captan 80 WG labels for details of varietal restrictions.

RATES OF USE AND TIMING OF APPLICATION

INDAR 5EW is most effective when used as part of a routine preventative spray programme.

Apply INDAR 5EW from bud burst to the onset of petal fall. INDAR 5EW is safe to use during flowering.

After the onset of petal fall INDAR 5EW should be tank-mixed with low rates of a protectant fungicide to enhance fruit scab control. KARAMATE DRY FLO, Dithianon Flowable or PP Captan 80 WG are recommended.

Spray interval	Bud burst to onset of petal fall	From onset of petal fall		
		Tank mix the listed rates of INDAR 5EW with either		
	INDAR 5EW	Dithianon Flowable	PP Captan 80 WG	KARAMATE DRY FLO
7 days	0.7 litre	0.3 litre	0.6 kg	1.5 kg
8-10 days	1.0 litre	0.4 litre	0.85 kg	2.1 kg
11-14 days	1.4 litre	0.6 litre	1.2 kg	3.0 kg

If the spraying intervals shown above have been unavoidably extended, the next spray should be at the 11-14 day rate(s) to maximise the curative activity of INDAR 5EW.

In periods of rapid growth or high disease pressure, INDAR 5EW and partner fungicides should be used at 7 day instead of 8-10 or 11-14 day intervals.

WATER VOLUME

Early season: Minimum 200 litres/ha
Trees in full leaf: Minimum 500 litres/ha

MIXING

INDAR 5EW Alone:

Shake the container well before use. Pour required amount of INDAR 5EW into a partially filled spray tank and top up with the agitation working. Maintain agitation before and during spraying.

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Tank mixing with Dithianon Flowable:

Pour the INDAR 5EW 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 INDAR 5EW 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.

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

TRADEMARK ACKNOWLEDGMENTS

INDAR 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 Ltd.

CONDITION 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.

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: **INDAR 5EW FUNGICIDE (GF-1339)**

LV70: 104168 Issue Date: Sept 05 Ref: PS014

Revised: Nov 06 (section(s) 2, 6-10, 14, 16

2. COMPOSITION/INFORMATION ON INGREDIENTS

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

			CAS	EC No
Fenbuconazole	5%	N; R50/53	114369-43-6	406-140-2
Solvent naphtha (petroleum), heavy aromatic	40-50%	Xn,N; R51/53-65-66	64742-94-5	265-198-5
Cyclohexanone	10-20%	Xn; R20, R10	108-94-1	203-631-1
Alkoxylated alcohol	<5%	Xi; R36/38	9038-95-3	
Alkyl aryl sulfonate	<5%	Xi,N; R38-41-51/53	68953-96-8	273-234-6
Solvent naphtha (petroleum), light aromatic	<5%	Xn,N; R10-37-51/53-65-66-67	64742-95-6	265-199-0
Propylene glycol	<5%		57-55-6	
Naphthalene (Carc.Cat 3)	<1%	Xn,N; R22-40	91-20-3	202-049-5

plus	
Inert ingredients	Balance
Composition Code	GF1339

3. HAZARDS IDENTIFICATION

Irritating to eyes. Toxic to aquatic organisms. May cause long-term adverse effects in the aquatic environment.

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. 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.

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. This material contains a mixture of solvents. Signs of toxicity are most likely to be due to the solvent. Signs and symptoms of excessive exposure may be central nervous system effects such as headache, dizziness or anaesthesia. 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. Foam. Dry chemical powder.

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: Sulphur oxides. Hydrogen chloride. Nitrogen oxides.

Protection of Firefighters

Wear protective clothing and use self-contained breathing apparatus.

Additional Information

Keep containers cool by spraying with water. Contain run-off to prevent entry into water or drainage systems. Work upwind of any spill. Avoid breathing smoke.

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.

7. HANDLING AND STORAGE

Handling

Avoid eye and skin contact. 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. The recommended storage temperature is 0-50 deg.C. 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

Fenbuconazole: Dow AgroSciences recommendation is 1.0 mg/m³.

Cyclohexanone: ACGIH Threshold Limit Value (TLV) is 25 mg/m³

Time-Weighted Average is 10 ppm.

Short-Term Exposure Limit is 20 ppm.

Can Be Absorbed Through Skin.

Propane-1,2-Diol, Particulates: Time-Weighted Average is 10 mg/m³.

Propane-1,2-Diol, Total Vapour And Particulates: is 474 mg/m³ (150 ppm).

Solvent naphtha (petroleum), heavy aromatic: Supplier recommendation for solvent is 100 mg/m³.

Solvent naphtha (petroleum), light aromatic: Supplier recommendation

for solvent is 19 ppm.

Engineering Controls

Good general ventilation should be sufficient for most conditions.

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 EN374. Examples of preferred glove barrier materials include: Nitrile. Examples of acceptable glove barrier materials include: 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 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	: off-white
Odour	: aromatic
Water solubility	: emulsifiable
Flashpoint	: >100 deg.C (SETA)
Density	: 1.01 g/cm ³ (20 deg.C)
pH	: 7.3 at 23 deg.C. (1% w/w aq.soln.)
Explosivity	: not explosive
Oxidisation	: not oxidising

10. STABILITY AND REACTIVITY

Chemical Stability

Is stable under normal storage conditions.

Conditions to Avoid

Avoid extremes of temperature.

Materials to Avoid

Strong basic, acidic or oxidising materials.

Hazardous Decomposition Products

None under normal conditions of storage and use. Thermal decomposition products include: Hydrogen chloride.

11. TOXICOLOGICAL INFORMATION

Based on data for similar formulation.

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. Short single exposure may cause skin irritation.

Sensitisation

Non-sensitising to guinea pig skin.

Eye Contact

May cause moderate eye irritation.

Inhalation

No adverse effects anticipated by this route of exposure incidental to proper handling. Excessive exposure may cause irritation to upper respiratory tract (nose and throat).

Additional Information

Not carcinogenic. Not mutagenic. Not toxic for reproduction.

12. ECOLOGICAL INFORMATION

Assessment largely or completely based on data for active ingredient.

Persistence and Degradability

Half-life in soils is dependent on soil type and conditions and is approximately 10-84 days.

Aquatic Toxicity

Material is expected to be toxic to aquatic organisms (LC₅₀/EC₅₀/IC₅₀ between 1 and 10 mg/L in most sensitive species).

Avian Toxicity

Acute oral LD₅₀ for birds is reported to be >2000 mg/kg.

Additional Information

LD₅₀ for bees is >292 microgram/bee.

13. DISPOSAL CONSIDERATIONS

For aquatic organisms, material is expected to be Toxic. Do not contaminate ponds, waterways or ditches with chemical or used container. Wash out thoroughly. Container and washings must be disposed of safely and in accordance with applicable regulations. The preferred options are to send to licensed reclaimer or to permitted incinerators.

14. TRANSPORT INFORMATION

Road & Rail

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

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. (Fenbuconazole)

Sea - IMO/MDG 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. (Fenbuconazole)

Air-ICAO/IATA Class : 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 : Xi - Irritant
N - Dangerous for the Environment

Risk Phrases : Irritating to eyes (R36).
Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment (R51/53).

Safety Phrases : 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).
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 2

R10 - Flammable.

R20 - Harmful by inhalation.

R22 – Harmful if swallowed.

R36/38 – Irritating to eyes and skin.

R37 – Irritating to respiratory system.

R38 – Irritating to skin.

R40 – Limited evidence of carcinogenic effect.

R41 – Risk of serious damage to eyes.

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 but no warranty, express or implied, is made.

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