CORTEVA agriscience

INDAR® 50 EW

FUNGICIDE

Registration number/Registrasie nommer: L5453 Act/Wet Nr. / No. 36 of / van 1947

READ THE LABEL BEFORE USE
KEEP OUT OF REACH OF CHILDREN AND ANIMALS

FRAC GROUP	**3**	**FUNGICIDE**

AN EMULSION (OIL IN WATER) FUNGICIDE FOR THE TREATMENT OF SCAB OF APPLES AND PEARS AND BROWN ROT OF STONE FRUIT.	**'N EMULSIE (OLIE IN WATER) SWAMDODER VIR DIE BEHANDELING VAN SKURF VAN APPELS EN PERE EN BRUINVROT VAN STEENVRUGTE.**

DANGER

HAZARD STATEMENTS
Flammable liquid and vapour.
Causes skin irritation.
Causes serious eye damage.
Toxic to aquatic life with long lasting effects.

PRECAUTIONARY STATEMENTS
Keep away from heat, hot surfaces, sparks, open flames, and other ignition sources. No smoking.
Wear protective gloves/protective clothing/eye protection/face protection.
IF ON SKIN: Wash with plenty of water.
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present, and easy to do. Continue rinsing. Immediately call a poison centre/doctor.
Collect spillage.
Dispose of contents/container in accordance with applicable regulations.

Active Ingredient / Aktiewe Bestanddeel

Fenbuconazole (DMI-Triazole) ………………. 50 g/l …………………… Fenbukonasool (DMI-Triasool)

Net Contents …………………………………… L ……………………………………… Netto Inhoud

REGISTRATION HOLDER / REGISTRASIEHOUER
CORTEVA AGRISCIENCE RSA (PTY) LTD / (EDMS) BPK
REG NO 1991/003030/07
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272 West Avenue, CENTURION, 0157 South Africa
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Batch Number ……………………………… ………………………………………… Lotnommer
Date of Manufacture ……………………… ……………………………… Vervaardigingsdatum
Expiry Date ………………………………… ……………………………………… Vervaldatum

UN NO: 3082
Poisons Helpline: +27(0)861-555-777
Local Emergency No: +27(0)82-895-0621 (SA only)
24 Hour Emergency Tel No: +32-3-575-5555
Information Hotline Tel No: +27(0)12 683-5700

INDAR® 50 EW/2023-05-08

---Internal Use---

WARNINGS

HAZARD STATEMENTS:
Flammable liquid and vapour. Causes skin irritation. Causes serious eye damage. Toxic to aquatic life with long lasting effects.

Allow the following number of days between last application and harvest:

Apples and Pears…..…………….. 14 days
Apricots, peaches including nectarines and plums. ....……….... 1 day

Note: Withholding periods above are based on local requirements for residue levels and may differ from other countries to which treated products may be exported

Harmful by skin contact, ingestion, and inhalation.
Toxic to fish.
Store in cool place away from food and feedstuffs.
Keep out of reach of children, uninformed persons, and animals.

DISCLAIMER

Although this remedy has been extensively tested under a large variety of conditions, the registration holder does not warrant that it will be efficacious under all conditions because the action and effect thereof may be affected by factors such as abnormal climatic and storage conditions, quality of dilution water, compatibility with other substances not indicated on the label and the occurrence of resistance of the disease to the remedy concerned, as well as by the method, time and accuracy of application.
The registration holder furthermore does not accept responsibility for damage to crops, vegetation, the environment or harm to man or animal or for the lack of performance of the remedy concerned due to failure of the user to follow the label instructions or to the occurrence of conditions which could not have been foreseen in terms of the registration. Consult the supplier in the event of any uncertainty.

PRECAUTIONS

PRECAUTIONARY STATEMENTS:
Keep away from heat, hot surfaces, sparks, open flames, and other ignition sources. No smoking. Wear protective gloves/protective clothing/eye protection/face protection. IF ON SKIN: Wash with plenty of water. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present, and easy to do. Continue rinsing. Immediately call a POISON CENTRE/doctor. Collect spillage. Dispose of contents/container in accordance with applicable regulations.

Do not inhale spray mist and prevent eye and skin contact.
Wear suitable face protection and rubber gloves and boots when preparing and applying spray mixture.
Wash with soap and water after use.
Do not eat, drink, or smoke while mixing, applying, or before having washed hands and exposed skin.
Avoid drift of spray mist onto other crops, grazing or areas not under treatment, rivers, and dams.
Clean applicator after use and dispose of wash water where it will not contaminate grazing, rivers, or dams.
Rinse empty container three times with a volume of water equal to at least one tenth of the container and add the rinsings to the spray tank. Destroy empty container by perforation and flattening and do not use for any other purpose.
Prevent contamination of food, feedstuffs, drinking water and eating utensils.

RELEVANT SUBSTANCES:

COMPONENT	**CAS-No.**	**Concentration (% w/w)**
fenbuconazole (ISO)	114369-43-6	5,1
	608-023-00-3	
Hydrocarbons, C10-C13, aromatics, <1% naphthalene	Not Assigned	>= 40 - < 50
cyclohexanone	108-94-1	>= 10 - < 20
Hydrocarbons, C9, aromatics	Not Assigned	>= 1 - < 2,5
Benzenesulfonic acid, mono-C11-13branched alkyl derivs., calcium salts	68953-96-8	>= 1 - < 2,5

DIRECTIONS FOR USE: **Use only as directed**

RESISTANCE MANAGEMENT

For resistance management, **INDAR® 50 EW** is a group 3 fungicide. Any disease population may contain strains naturally resistant to **INDAR® 50 EW** and other members within group 3 fungicides. The resistant strains will eventually dominate the disease population if these fungicides are used repeatedly in exclusive programmes. These resistant strains may not be controlled by **INDAR® 50 EW** or other group 3 fungicides. The classification scheme is based on mode of action. If field resistance is known to one member of a group, it is likely, but not certain that cross-resistance to other group members will also be present. It is recognised that such cross-resistance can be a variable factor between group members and the degree of the effect can differ both between fungal genera and species and even within species. Despite this, alternation of compounds from different chemical classes remains a viable management technique. To delay fungicide resistance

- Avoid exclusive repeated use of fungicides from the same chemical group or subgroup.
- Integrate other methods (chemical, cultural, biological) into disease control programmes

For further information contact your local distributor
INDAR® 50 EW should not be used in more than 4 applications per crop per season.

COMPATIBILITY

INDAR® 50 EW is compatible with most crop protection products normally used on deciduous fruit. A physical compatibility test should be conducted before mixing. Consult supplier in case of any doubt.

MIXING INSTRUCTIONS

Where **INDAR® 50 EW** is used in a tank mix with wettable powder formulations, the wettable powder should first be mixed with water to a slurry, before it is added to the partially filled spray tank. Add water to about 50 % capacity and agitate before adding the **INDAR® 50 EW**. The tank may then be filled to the required level. Agitate throughout mixing, transportation, and spraying operations.

APPLICATION RECOMMENDATIONS:

The spray volume required per hectare for HV applications at a specific growth stage should be accurately determined according to Unrath's formula of Tree Row Volume (TRV) and High-Volume Requirement (HVR)

$$TRV = \frac{\text{Tree Height* x Tree Width*}}{\text{Distance between Rows}} \qquad HVR = TRV \times 937 = \text{Litre per ha}$$

(Tree height and tree width should be measured during summer when trees are in full flush)

Directions for application volumes at different growth stages and the calculation of rate per ha, based on high volume requirements:

Growth Stage	Application volume
Bud break to full blossom	60% x HVR
90% Petal fall to one month later (Mid season)	80% x HVR
Mid season to post harvest, before leaf drop	100% x HVR

CROP/ DISEASE	DOSAGE/100 L WATER	REMARKS
APPLES AND PEARS Scab *(Venturia inaequalis and V. pirina)*	40 ml **INDAR® 50 EW** + 75 g Dithane 750 WG Neotec (Reg No.L4213) or Dithane M45 800 WP (Reg.No.L2914)	**1. SCHEDULED PROGRAMME** **Growth stage:** ***Pre-blossom to full blossom*** Commence spraying at green tip and re-apply at 7-day intervals. ***Post blossom*.** Spray at 14-day intervals. **2. CURATIVE PROGRAMME** (For use where a reliable disease forecasting system is available). Apply as soon as possible after an infection period has been monitored with an index high enough for the development of a leaf infection (Pre-blossom) and a fruit infection (Post blossom). The period from the beginning of an infection period (rain) and the application of **INDAR® 50 EW** should not exceed 5 days. N.B. Where powdery mildew is a problem in apples, specific control measures against powdery mildew should form part of the spray programme.
STONE FRUIT Brown rot *(Monilinia laxa)*	80 ml	Start applying 15 days before harvest and apply 3 sprays at 7-day intervals with the last application, one day before harvest.

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WAARSKUWINGS

RISIKOVERKLARINGS:
Vlambare vloeistof en damp. Veroorsaak velirritasie. Veroorsaak ernstige oogskade. Giftig vir waterlewe met langdurige effekte.

Laat volgende aantal dae toe tussen laaste toediening en oes:

Appels en pere ....…………………... 14 dae
Appelkose,perskes insluitende nektariens en pruime .....…………………... 1 dag

LET WEL: Bogenoemde onthoudingsperiodes is gebaseer op plaaslike vereistes vir residuvlakke en mag verskil van ander lande waarheen behandelde produkte moontlik uitgevoer word.

Skadelik by inname, velkontak en inaseming.
Giftig vir visse.
Stoor in koel plek weg van voedsel en voer.
Hou buite bereik van kinders, oningeligte persone en diere.

VRYWARING

Alhoewel hierdie middel omvattend onder 'n groot verskeidenheid toestande getoets is, waarborg die Registrasiehouer nie dat dit onder alle toestande doeltreffend sal wees nie aangesien die werking en effek daarvan beïnvloed kan word deur faktore soos abnormale klimaats- en bergingstoestande; kwaliteit van verdunningswater, verenigbaarheid met ander stowwe wat nie op die etiket aangedui is nie en die voorkoms van weerstand van die siekte teen die betrokke middel, sowel as die metode, tyd en akkuraatheid van toediening. Verder aanvaar die Registrasiehouer nie verantwoordelikheid vir skade aan gewasse, plantegroei, die omgewing of vir nadelige effek op mens of dier of vir 'n gebrek aan prestasie van die betrokke middel as gevolg van die versuim van die gebruiker om etiketaanwysings na te kom of as gevolg van die ontstaan van toestande wat nie kragtens die registrasie voorsien kon word nie. Raadpleeg die verskaffer in die geval van enige onsekerheid.

VOORSORGMAATREËLS

VOORKOMENDE VERKLARINGS:
Hou weg van hitte, warm oppervlaktes, vonke, oop vlamme en ander ontstekingsbronne. Geen rook nie. Dra beskermende handskoene/beskermende klere/oogbeskerming/gesigskerm. INDIEN OP DIE VEL: Was met baie water. INDIEN IN OË: Spoel versigtig uit met water vir 'n paar minute. Verwyder kontaklense, indien teenwoordig, en maklik om te doen. Gaan voort met spoel. Ontbied onmiddellik 'n gifbeheersentrum/dokter. Versamel verspilde produk. Raak ontslae van inhoud/houer in ooreenstemming met toepaslike regulasies.

Moet nie spuitnewel inasem nie en vermy oog en velkontak.
Dra toepaslike gesigsbeskerming en rubberhandskoene en -stewels wanneer spuitmengsel voorberei en aangewend word.
Was met seep en water na gebruik.
Moet nie eet, drink of rook terwyl middel gemeng of toegedien word of voordat hande en blootgestelde vel gewas is nie.
Voorkom wegdrywing van spuitnewel na ander gewasse, weidings, riviere en damme.
Maak spuittoestel na gebruik skoon en raak ontslae van die spoelwater waar dit nie gewasse, weidings of water sal besoedel nie.
Spoel leë houer drie keer uit met 'n volume water gelyk aan ten minste een tiende van die houer en voeg die uitspoel water by die inhoud van die spuittenk voordat die houer vernietig word deur gate in te kap en plat te druk.
Moet nie leë houer vir enige ander doel gebruik nie.
Vermy besoedeling van voedsel, voer, drinkwater en eetgerei.

RELEVANTE STOWWE:

KOMPONENT	CAS-No.	Konsentraat (% w/w)
fenbukonasool (ISO)	114369-43-6	5,1
	608-023-00-3	
Koolwaterstowwe, C10-C13, aromaten, <1% naftaleen	Nie toegeken	>= 40 - < 50
sikloheksanoon	108-94-1	>= 10 - < 20
Koolwaterstowwe, C9, aromaten	Not Assigned	>= 1 - < 2,5
Benseensulfonsuur, mono-C11-13-vertakte alkielderivate, kalsiumsoute	68953-96-8	>= 1 - < 2,5

GEBRUIKSAANWYSINGS: Gebruik slegs soos aangedui.

WEERSTANDSBESTUUR

Vir die doel van weerstandsbestuur is **INDAR® 50 EW**, op grond van werkingswyse as ‘n groep 3 swamdoder gegroepeer. Enige siekte mag rasse, wat ‘n natuurlike weerstand teen **INDAR® 50 EW** of ander swamdoders binne die groep het, insluit. Indien swamdoders binne die groep herhaaldelik in eksklusiewe programme aangewend word, sal die weerstandbiendende rasse uiteindelik oorheersend in die populasie voorkom. Hierdie weerstandbiedende rasse mag waarskynlik nie deur **INDAR® 50 EW** of ander swamdoders in groep 3 (met dieselfde werkingswyse) beheer word nie. Indien weerstand in ‘n bepaalde gebied teen een middel binne die groep bekend is, is dit hoogs waarskylik, maar nie noodwendig nie, dat weerstand teen ander middels binne dieselfde groep ook aanwesig is. Dit is bekend dat sulke kruisweerstand ‘n variërende faktor tussen verskillende middels binne dieselfde groep kan wees en dat die graad van weerstandbiedenheid tussen beide genera en spesies van ‘n siekte en selfs tussen spesies binne dieselfde genera kan wissel. Nieteenstaande die verskynsel, bly die afwisseling van nie-verwante middels steeds ‘n lewensvatbare bestuurspraktyk teen moontlike opbouing van weerstandbiedende siektepopulasies. Om weerstand teen swamdoders te vertraag

- Vermy herhaaldelike en eksklusiewe aanwending van swamdoders binne dieselfde chemiese groep of subgroep.
- Integreer ander metodes (chemies, verbouing, biologies) in siektebeheer programme.

Skakel u plaaslike voorsiener van plaagbeheer middels vir meer inligting.

INDAR® 50 EW moet nie meer as 4 maal per seisoen per gewas toegedien word nie

VERENIGBAARHEID

INDAR® 50 EW kan gemeng word met die meeste middels in algemene gebruik op sagtevrugte gewasse. 'n Fisiese verenigbaarheidstoets word aanbeveel. Raadpleeg die verskaffer in geval van enige twyfel.

MENGINSTRUKSIES

Waar tenkmengsels van **INDAR® 50 EW** en benatbare poeiers gemaak word, word die benatbare poeier eers met 'n bietjie water tot 'n room vermeng, voordat dit in die spuittenk, wat gedeeltelik vol water is, gevoeg word. Voeg verder water by tot omtrent 50 % kapasiteit en roer voordat die **INDAR® 50 EW** bygevoeg word. Die spuittenk kan dan tot die gewenste vlak volgemaak word. Roer aanhoudend gedurende meng, vervoer en toediening.

TOEDIENINGS AANBEVELINGS

Die dosis en spuitvolume wat op ‘n spesifieke groeistadium per ha benodig word, moet volgens Unrath se formule vir boomryvolume (BRV) en hoë volume behoefte (HVB), bepaal word.

$$\text{BRV} = \frac{\text{Boomhoogte* x Boomwydte*}}{\text{Afstand tussen rye}} \qquad \text{HVB = BRV x 937 = Liter per ha}$$

*(Boomhoogte en boomwydte moet gedurende somer gemeet word wanneer die bome in vol groei is)

Riglyne vir toedieningsvolumes en die berekening van die dosis per ha gebaseer op hoëvolume vereistes by verskillende groeistadiums.

Groeistadium	Toedieningsvolume
Bot tot volblom	60% x HVB
90% Blombaarval tot een maand later (Midseisoen)	80% x HVB
Midseisoen tot na-oes, voor blaarval	100% x HVB

GEWAS/ SIEKTE	DOSIS/100 L WATER	OPMERKINGS
APPELS EN PERE Skurf *(Venturia inaequalis and V. pirina)*	40 ml **INDAR® 50 EW** + 75g Dithane 750 WG Neotec (Reg Nr L4213) of Dithane M45 800 WP (Reg Nr L2914)	1.GESKEDULEERDE PROGRAM **Groeistadium**: ***Voorblom tot volblom***. Begin bespuitings by groenpunt stadium en herhaal met tussenposes van 7 dae. ***Nablom***. Dien toe met tussenposes van 14 dae. 2.KURATIEWE PROGRAM (Vir gebruik waar 'n betroubare siekte voorspellings sisteem bestaan). Dien toe so gou as moontlik nadat 'n infeksieperiode gemonitor is met 'n indeks hoog genoeg vir die totstandkoming van blaarinfeksie (voor-blom) en vruginfeksie (na-blom). Die tydperk vanaf die begin van die infeksie periode (reën) tot die toediening van **INDAR® 50 EW** moet nie 5 dae oorskry nie. **L.W.** Waar poeieragtige skimmel 'n probleem in appels is, moet spesifieke middels daarteen gebruik word as deel van die program.
STEENVRUGTE Bruinvrot (*Monilinia laxa*)	80 ml	Begin spuit 15 dae voor oes en dien drie bespuitings toe met 7 dae intervalle sodat die laaste bespuiting op die dag voor oes toegedien word.

Plaaslike noodnommer: +27(0)82-895-0621 (slegs SA)
24 Uur nood Tel No: +32-3-575-5555
Inligtingsnoodlyn: Tel No: +27(0)12 683-5700