

IMACULATE 300 EC

Act No. 36 of 1947 / Wet Nr. 36 van 1947
SA Reg. No. L9080 / NAM Reg. No. N-AR 2154 / BWA Reg. No. W1301629

**READ ATTACHED PACKAGED LEAFLET BEFORE USE
KEEP OUT OF REACH OF CHILDREN AND ANIMALS**

GROUP

3

FUNGICIDE

PRODUCT INFO:

An emulsifiable concentrate fungicide for postharvest decay control of Green and Blue Mold (*Penicillium digitatum*, *P. Italicum*) and Sour rot (*Geotrichum citri-aurantii*) on Citrus.

PRODUK INFO:

’n Emulgeerbare konsentraat swamdoder vir na-oesbederf beheer van Groen- en Blou Skimmel (*Penicillium digitatum*, *P. italicum*) en Suurvrot (*Geotrichum citri-aurantii*) op Sitrus.

HAZARD STATEMENTS:

Flammable liquid and vapour.
Harmful if swallowed.
May be harmful if swallowed and enters airways.
Causes skin irritation.
Causes serious eye damage.
Suspected of causing cancer.
Very 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 and face protection.
Wash hands and exposed skin thoroughly after handling. Do not touch eyes.



DANGER

Active Ingredient / Aktiewe Bestanddeel

Imazalil (imidazole) 300 g/ℓ Imasalil (imidasool)

Net (ℓ) SEE CONTAINER

Registration Holder / Registrasiehouer



ICA International Chemicals (Pty) Ltd. • Reg. No. 2001/013319/07
28 Planken Street • Plankenbrug Industrial • STELLENBOSCH • 7600 • SOUTH AFRICA
Tel. +27-21 886 9812 • www.icaonline.co.za

Batch No. SEE Lot Nr.
Date of Manufacture CONTAINER Datum van Vervaardiging

In case of poisoning, call the following number: Human Poison Helpline +27-861 555 777
Emergency number: Griffon Poison Information Centre +27-82 446 8946

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An emulsifiable concentrate fungicide for postharvest decay control of green and blue mould (*Penicillium digitatum* & *P. italicum*) and sour rot (*Geotrichum citri-aurantii*) on citrus.

ACTIVE INGREDIENT:

Imazalil (imidazole) 300 g/l

REGISTERED BY:

ICA International Chemicals (Pty) Ltd., Reg. No. 2001/013319/07
28 Planken Street • Plankenbrug Industrial • Stellenbosch • 7600 • South Africa
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WARNINGS

Flammable liquid and vapour
Harmful if swallowed
May be harmful if swallowed and enters airways
Causes skin irritation
Causes serious eye damage
Suspected of causing cancer
Very toxic to aquatic life with long lasting effects

WITHHOLDING PERIODS (Minimum number of days between last application and harvest): Not applicable for postharvest use.

Compliance with these withholding periods and application methods will ensure that residues do not exceed local maximum residue limits (MRL) but may not meet the import requirements of other countries. If the crop to be treated is intended for export, consult the relevant importer or exporting body regarding the use of this product, MRL and recommended withholding periods. Although **IMACULATE 300 EC** is regarded as crop-safe on most of the important cultivars, this does not mean that a more sensitive cultivar might be available in future. **IMACULATE 300 EC** must be tested on new cultivars prior to usage.

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 against 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, and the environment or harm to man/animal or for 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

If medical advice is needed, have product container or label at hand.
Obtain, read, and follow all safety instructions before use.
Keep away from heat, hot surfaces, sparks, open flames, and other ignition sources. No smoking.
Keep container tightly closed.
Ground and bond container and receiving equipment.
Use explosion-proof [electrical, ventilating, lighting] equipment.
Use non-sparking tools.
Take action to prevent static discharges.
Avoid breathing mist and spray.
Wash hands and exposed skin thoroughly after handling. Do not touch eyes.
Do not eat, drink, or smoke when using this product.
Avoid release to the environment.
Wear protective gloves, protective clothing, eye and face protection.
IF SWALLOWED: Rinse mouth and get emergency medical help immediately.
Do NOT induce vomiting.
IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse affected areas with soap and water or take a shower.
IF IN EYES: Immediately rinse with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing and get medical help.
If exposed or concerned, get medical advice.
For specific treatment, see first aid measures on this label.
If skin irritation occurs: Get medical help.
Take off contaminated clothing and wash it before reuse.
In case of fire: Use water spray, alcohol-resistant foam, dry chemical, or carbon dioxide (CO₂) to extinguish the fire.
Collect spillage.
Store in a well-ventilated place. Keep cool.
Store locked up.
Dispose of contents and container in accordance with national regulations.

TRIPLE RINSE THE EMPTY CONTAINER AS FOLLOWS: Invert the empty container over the spray or mixing tank and drain for at least 30 seconds after the flow has slowed down to a drip. Triple rinse the empty container with clean water equal to a minimum of 30 % of the volume of the container. Add rinsing to the contents of the spray tank. Offer container for recycling or puncture and dispose of at an authorised landfill (www.croplife.co.za). Do not bury, burn or donate the container to any other parties that may use it as a container for food or beverages.

RELEVANT SUBSTANCES:

Imazalil (Cas no: 35554-44-0) Acute Oral Toxicity Category 3, H301; Acute Inhalation Toxicity Category 4, H332; Eye Damage Category 1, H318; Carcinogen Category 2, H351; Aquatic Chronic Category 1, H410 (30 % w/v).

Caproaldehyde (Cas no: 66-25-1) Flammable liquid Category 3, H226; Skin Irritation Category 2, H315; Eye Irritation Category 2, H319 (30 – 60 % w/v).

Propylene carbonate (Cas no: 108-32-7) Eye Irritation Category 2, H319 (< 10 % w/v).

N-octyl-2-pyrrolidone (Cas no: 2687-94-7) Skin Corrosion Category 1B, H314; Aquatic Chronic Category 2, H411 (< 10 % w/v).

Solvent Naphtha (Cas no: 64742-94-5) Aspiration Hazard Category 1, H304 (< 10 % w/v).

FIRST AID MEASURES

In case of accident or if you feel unwell seek medical advice immediately and show this LABEL where possible.

INHALATION:	<ul style="list-style-type: none">Remove the victim from immediate source of exposure. Move victim to fresh air, if it can be done safely, and keep comfortable.If victim's breathing has stopped, perform artificial respiration.DO NOT perform mouth-to-mouth resuscitation if victim ingested or inhaled the substance; wash face and mouth before giving artificial respiration. Use a pocket mask equipped with a one-way valve or other proper respiratory medical device.Administer oxygen if victim's breathing is difficult or irregular. Get medical help.
SKIN:	<ul style="list-style-type: none">Remove and isolate contaminated clothing, shoes, and leather goods immediately and take a shower.Rinse affected areas (skin) immediately with non-abrasive soap or mild detergent and large amounts of running water. Wash contaminated clothing before reuse.Get medical help if irritation develops and persists.
EYES:	<ul style="list-style-type: none">Rinse eyes IMMEDIATELY with clean running water for at least 15 minutes, while holding eyelids apart.Remove contact lenses after 5 minutes if present and easy to do. Continue rinsing while holding eyelids apart.Seek medical help if irritation continues.
INGESTION:	<ul style="list-style-type: none">If swallowed, DO NOT induce vomiting, unless instructed to do so by poison control centre or doctor.Rinse mouth and have person sip a glass of water if able to swallow. Never give anything by mouth to an unconscious person.If vomiting does occur, keep on giving fluids. Get emergency medical help immediately.
NOTE TO PHYSICIAN:	<ul style="list-style-type: none">There is no specific antidote. All treatments should be based on observed signs and symptoms of distress in the patient.
POTENTIAL HEALTH EFFECTS, ACUTE AND DELAYED:	<ul style="list-style-type: none">Effects of exposure (inhalation, ingestion, or skin contact) to substance may be delayed. Suspected of causing cancer.

RESISTANCE WARNING

For resistance management, **IMACULATE 300 EC** is a group code **(3)** fungicide. Any fungal population may contain individuals naturally resistant to **IMACULATE 300 EC** and other group code **(3)** fungicides. The resistant individuals can eventually dominate the fungal population if these fungicides are used repeatedly. These resistant fungi may not be controlled by **IMACULATE 300 EC** or any other group code **(3)** fungicides.

To delay fungicide resistance:

- avoid exclusive repeated use of fungicides from the same fungicide group code,
- alternate or tank mix with products from different fungicide group codes,
- integrate other control methods (chemical, cultural, biological) into disease control programmes.

For specific information on resistance management contact the registration holder of this product.

MODE OF ACTION

Imazalil disrupts fungal membrane function. Targeting cell membrane integrity by inhibiting C14 demethylation during sterol formation. Systemic with curative and protective properties.

USE RESTRICTIONS

IMACULATE 300 EC *does not mix easily with cold citrus waxes.*

First mix **IMACULATE 300 EC** *thoroughly with ± 500 mL warm water* (± 40 °C) *before adding to the wax* in the applicator.

Refer to **DIRECTIONS FOR USE** for more information.

DIRECTIONS FOR USE – use only as directed

COMPATIBILITY:

IMACULATE 300 EC is compatible with citrus fruit waxes. The compatibility of **IMACULATE 300 EC** with other products depends on the formulations of the respective products as well as the quality of the spray water or wax to be used. A physical compatibility test must always be performed before such a mixture is made.

MIXING INSTRUCTIONS:

IMACULATE 300 EC *does not mix easily with cold citrus waxes.* Since large droplets of undiluted **IMACULATE 300 EC** can cause serious phytotoxicity to citrus fruit, it is necessary to *first mix* **IMACULATE 300 EC** *thoroughly with ± 500 mL warm water* (± 40 °C) *before adding to the wax* in the applicator. The resulting mixture must be agitated constantly.

APPLICATION AND DOSAGE RATE:

Mix 250 mL **IMACULATE 300 EC** in 25 litre citrus wax to obtain a treatment concentration of 3000 ppm imazalil. *After the dilution* of **IMACULATE 300 EC** in wax, the *mixture must be stirred thoroughly* for at least 15 minutes with mixing device, before application.

Clean equipment thoroughly after use and dispose of wash water where it will not contaminate crops, grazing, rivers or dams.

IMACulate 300 EC

Wet Nr. 36 van 1947

SA Reg. Nr. L9080 / NAM Reg. Nr. N-AR 2154 / BWA Reg. Nr. W1301629

'n Emulgeerbare konsentraat swamdoder vir na-oesbederf beheer van groen- en blouskimmel (*Penicillium digitatum* & *P. italicum*) en suurvrot (*Geotrichum citri-aurantii*) op sitrus.

AKTIEWE BESTANDEDEL:

Imasalil (imidasool) 300 g/ℓ

GEREGISTREER DEUR:

ICA International Chemicals (Pty) Ltd., Reg. Nr. 2001/013319/07
Plankenstraat 28 • Plankenbrug Industrieël • Stellenbosch • 7600 • Suid-Afrika
Tel. +27-21 886 9812 • www.icaonline.co.za

WAARSKUWINGS

Vlambare vloeistof en damp
Skadelik indien ingesluk
Kan skadelik wees indien ingesluk en lugweg binnedring
Veroorsaak velirritasie
Veroorsaak ernstige oogskade
Vermoede dat dit kanker veroorsaak
Baie giftig vir waterlewende organismes met langdurige gevolge

ONTHOUDINGSPERIODES (Minimum aantal dae tussen laaste toediening en oes): Nie van toepassing vir na-oes gebruik nie.

Nakoming van hierdie onthoudingsperiodes en toediening instruksies sal verseker dat die plaaslike maksimum residu limiete (MRL) nie oorskry word nie, maar mag dalk nie voldoen aan die invoervereistes van ander lande nie. Indien die gewas wat behandel gaan word, bestem is vir uitvoer, skakel met die betrokke invoerder of uitvoerliggaam rakende die gebruik van hierdie produk, die MRL en aanbevole onthoudingsperiodes. Alhoewel **IMACULATE 300 EC** as gewasveilig beskou word op die meeste belangrike kultivars, beteken dit nie dat 'n meer sensitiewe kultivar in die toekoms op die mark kan kom nie. **IMACULATE 300 EC** moet voor gebruik op nuwe kultivars getoets word.

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 grond-, klimaats- en bergingstoestande, kwaliteit van verdunningswater, verenigbaarheid met ander produkte wat nie op die etiket aangedui is nie en die voorkoms van weerstand 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 effekte op mens of dier of vir 'n gebrek aan doeltreffendheid, as gevolg van die versuim van die gebruiker om die 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 geval van enige onsekerheid.

VOORSORGMATREËLS

Indien mediese advies benodig word, hou die produkhouer of -etiket byderhand.
Hou buite bereik van kinders.
Lees sorgvuldig en volg alle instruksies.
Verkry, lees en volg alle veiligheidsinstruksies voor gebruik.
Hou weg van hitte, warm oppervlakte, vonke, oop vlamme en ander ontstekingsbronne. Rook verbode.
Hou houer dig geseël.
Aard en verbind houer en ontvangstoerusting.
Gebruik plofbestande [elektriese, ventilasie, beligting] toerusting.
Gebruik vonkvrye gereedskap.
Stel voorkomende maatreëls teen statiese ontladings in.
Vermy inaseming van stuifsel en spuitstof.
Was hande en blootgestelde vel deeglik na hantering. Moet nie aan oë raak nie.
Moet nie eet, drink of rook wanneer hierdie produk gebruik word nie.
Vermy vrystelling in die omgewing.
Dra beskermende handskoene, beskermende klere, oog- en gesigbeskerming.
INDIEN INGESLUK: Spoel mond uit en verkry onmiddellik mediese noodhulp.
Moet nie vomering induseer nie.
INDIEN OP VEL (of hare): Trek onmiddellik alle besoedelde klere uit. Spoel aangetaste areas met seep en water of gaan stort.
INDIEN IN OË: Spoel onmiddellik met water vir etlike minute. Verwyder kontaklense, indien aanwesig en maklik om te verwyder. Hou aan met spoel en verkry mediese noodhulp.
Indien blootgestel of besorg, verkry mediese advies.
Vir spesifieke behandeling sien noodhulp instruksies op hierdie etiket.
Trek alle besoedelde klere uit en was dit voor hergebruik.
In geval van brand: Gebruik watersproei, alkoholbestande skuim, droë chemikalieë of koolstofdoksied (CO₂) om die brand te blus.
Maak stortsel bymekaar.
Berg in 'n goed geventileerde plek. Hou koel.
Berg agter slot en grendel.
Raak ontslae van inhoud en houer in ooreenstemming met nasionale regulasies.

SPOEL DIE LEË HOUER DRIE MAAL SOOS VOLG: Keer die leë houer om oor 'n meng- of spuitenk en laat vir ten minste 30 sekondes leegloop totdat die vloeï stadiger word tot 'n gedrup. Spoel die leë houer drie maal met skoon water gelyk aan 'n minimum van 30 % van die volume van die houer. Voeg spoelwater by die inhoud van die spuitenk. Bied houer aan vir herwinning of perforeer dit en raak daarvan ontslae by 'n gemagtigde opvulterrein (www.croplife.co.za). Moenie die houer begrawe, verbrand of aan enige ander partye skenk wat dit as houer vir voedsel of drinkgoed mag gebruik nie.

RELEVANTE STOWWE:

Imasalil (Cas no: 35554-44-0) Akute Giftigheid Mondelings Kategorie 3, H301; Akute Giftigheid Inaseming Kategorie 4, H332; Ernstige Oogskade Kategorie 1, H318; Karsinogeen Kategorie 2, H351; Waterlewend Kroniese Kategorie 1, H410 (30 % m/v).

Kaproaldehyd (Cas no: 66-25-1) Vlambare vloeistof Kategorie 3, H226; Velirritasie Kategorie 2, H315; Ernstige Oogirritasie Kategorie 2, H319 (30 – 60 % m/v).

Propileenkarbonaat (Cas no: 108-32-7) Ernstige Oogirritasie Kategorie 2, H319 (< 10 % m/v).

N-oktiel-2-pirrolidon (Cas no: 2687-94-7) Velkorrosie (Velinvreting) Kategorie 1B, H314; Waterlewend Kroniese Kategorie 2, H411 (< 10 % m/v).

Oplosmiddel nafta (Cas no: 64742-94-5) Inasemingsgevaar Kategorie 1, H304 (< 10 % m/v).

NOODHULP BEHANDELING

In geval van 'n ongeluk of as jy onwel voel, verkry onmiddellik mediese advies en wys hierdie ETIKET waar moontlik

INASEMING:	<ul style="list-style-type: none">• Neem die slagoffer weg van die onmiddellike bron van blootstelling. Verskuif die slagoffer na vars lug as dit veilig gedoen kan word en hou gemaklik.• Indien die slagoffer ophou asemhaal, pas kunsmatige asemhaling toe.• MOENIE mond-tot-mond-asemhaling toepas indien die slagoffer die stof opgeneem of ingeasem het nie; was gesig en mond voordat kunsmatige asemhaling toegepas word. Gebruik 'n sakmasker toegerus met 'n eenrigtingklep of ander geskikte mediese asemhalingtoestel.• Dien suurstof toe as die slagoffer se asemhaling moeilik of onreëlmatig is. Kry mediese hulp.• Verwyder en isoleer besmette klere, skoene en leergoedere dadelik en stort.
VEL:	<ul style="list-style-type: none">• Spoel aangetaste areas (vel) dadelik met nieskurende seep of sagwerkende wasmiddel en groot hoeveelhede lopende water. Was besmette klere voor hergebruik.• Kry mediese hulp indien irritasie ontwikkel en voortduur.
OË:	<ul style="list-style-type: none">• Spoel oë ONMIDDELLIK met skoon lopende water vir ten minste 15 minute terwyl die ooglede vanmekaar gehou word.• Verwyder kontaklense na 5 minute indien aanwesig en maklik om te doen. Hou aan met spoel terwyl ooglede vanmekaar gehou word.• Kry mediese hulp indien irritasie voortduur.
OPNEMING:	<ul style="list-style-type: none">• Indien ingesluk, MOENIE vomering induseer nie, tensy 'n gifsentrum of dokter opdrag gee om dit te doen.• Laat die persoon slukkies water neem indien dit moontlik is om te sluk. Moet nooit iets per mond aan 'n bewustelose persoon gee nie.• Indien die persoon wel vomeer, hou aan om vloeistowwe te gee. Verkry mediese noodhulp.
NOTA AAN GENEESHEER:	<ul style="list-style-type: none">• Daar is nie 'n spesifieke teenmiddel nie. Alle behandeling moet gebaseer word op waargenome tekens en simptome van nood by die pasiënt.
MOONTLIKE GESONDHEIDSGEVOLGE, AKUUT EN VERTRAAGD:	<ul style="list-style-type: none">• Gevolge van blootstelling (inaseming, opneming of velkontak) aan stof kan vertraag wees. Vermoede dat dit kanker veroorsaak.

WEERSTANDSWAARSKUWING

Vir weerstandsbestuur, **IMACULATE 300 EC** is 'n groeppode (3) swamdoder. Enige populasie van 'n spesifieke swam mag individue insluit wat 'n natuurlike weerstand teen **IMACULATE 300 EC** of enige ander groeppode (3) swamdoders het. Indien hierdie swamdoder herhaaldelik aangewend word, kan die weerstandbiedende individue uiteindelik die swampopulasie oorheers. Hierdie weerstandbiedende swamme sal waarskynlik nie deur **IMACULATE 300 EC** of enige ander groeppode (3) swamdoder beheer word nie.

Om weerstand teen swamdoders te verhoog:

- vermy die eksklusiewe herhaaldelike gebruik van swamdoders met dieselfde groeppode,
- wissel af met, of gebruik tenkingsels van produkte in verskillende swamdoder groeppodes,
- integreer ander beheermaatreëls (chemies, verbouing, biologies) in swamdoder programme.

Vir spesifieke inligting oor weerstandsbestuur, kontak die registrasiehouer van hierdie produk.

WERKINGSWYSE

Imasalil ontwig die swammembraan funksie. Dit teiken die selmembraanintegriteit deur C14-demetielering tydens sterolvorming te inhibeer. Imasalil is sistemies met genesende en beskermende eienskappe.

GEBRUIKSBEPERKINGS

IMACULATE 300 EC meng nie maklik met koue sitruswax nie.

Meng IMACULATE 300 EC eers deeglik met ± 500 ml warm water (± 40 °C) voordat dit by die waks in die toediener gevoeg word.

Verwys na **GEBRUIKSAANWYSINGS** vir meer inligting.

GEBRUIKSAANWYSINGS – gebruik slegs soos aangedui

VERENIGBAARHEID:

IMACULATE 300 EC is verenigbaar met sitruswaks. Die verenigbaarheid van **IMACULATE 300 EC** met ander produkte word bepaal deur die formulering van die onderskeie produkte asook die kwaliteit van die spuitwater of waks wat gebruik word. 'n Fisiese verenigbaarheidstoets moet altyd gedoen word voordat produkte vermeng en toegedien word.

MENGINSTRUKSIES:

IMACULATE 300 EC meng nie maklik met koue sitruswaks nie. Wanneer groot druppels of onverdunde **IMACULATE 300 EC** op sitrusvrugte aangewend word, kan ernstige fitotoksiteit veroorsaak word. Dit is noodsaaklik om IMACULATE 300 EC deeglik in ± 500 ml warm water (± 40 °C) te meng voordat dit by die res van die waks in toediener gevoeg word. Na byvoeging, moet die oplossing konstant gemeng word.

TOEDIENING EN DOSIS:

Meng 250 ml **IMACULATE 300 EC** in 25 liter sitruswaks om 'n behandeling konsentrasie van 3000 dpm imasalil te verkry. Na die verdunning van IMACULATE 300 EC in waks, meng deeglik vir minstens 15 minute met roerder, voor aanwending.

Maak toerusting deeglik skoon na gebruik en gooi spoelwater weg waar dit nie gewasse, weiding, riviere of damme sal besoedel nie.