

# FUNGICIDE BATH/ IN-LINE DRENCH

## General recommendation: Imazalil as sulphate + 2,4-D

1. The aim is to offer the best possible decay control of green and blue mould.
2. Imazalil as a sulphate is pH sensitive. Residue loading will be effected by exposure time and temperature. Consult supplier or CRI for assistance as required.
3. Alternative fungicides may be used but beware of mixing and heating restrictions e.g. SC-formulations will settle and pyrimethanil will lead to increased residue loading and possible MRL exceedances at high temperatures, especially on lemons.

### Mixing protocol

1. Fill water tank to 80% capacity and start pump(s).
2. Pre-suspend fungicides individually in lukewarm water (35 – 40°C).
3. Order of mixing:  
SG – SC – EC – SL
4. Fill water tanks to full capacity.
5. Let the system run for 15 minutes before commencing treatment to facilitate thorough mixing.

NB: For IMZ sulphate, if initial pH of water > 7; adjust to pH 7 BEFORE addition of imazalil. The pH of the imazalil mixture should never exceed 6; adjust pH if needed.

### Operation

1. Measure concentrations at least twice daily if method is available, and amend or top-up according to supplier recommendations.
2. Renew mixture AT LEAST once a week, preferably daily; sanitize appropriately.
3. Mixtures used for more than one day can be pasteurised by heating to 60°C for 35 minutes (without fruit), and letting it cool down overnight before use.
4. Effective exposure periods must be adjusted for each individual cultivar and be pH appropriate.
5. pH and exposure time
 

Bath	In-line
pH 3: 1 – 3 mins	pH 3: 8 – 15 s
pH 6: ≤ 45 s	pH 6: ≤ 8 s
6. The mixture temperature may range between 35 – 45°C. Mostly, for the bath, 35°C is ideal, while 45°C is suitable for the in-line drench.
7. For short exposure times, the use of heated imazalil mixtures is essential.
8. Optimum mixture temperature also depends on the cultivar and sensitivity of the specific fruit.
9. For soft citrus a maximum pH of 5 is recommended to prevent overloading of residues.

# SWAMDODERBAD/ IN-LYN STORT

## Algemene aanbeveling: Imasalil as sulfaat + 2,4-D

1. Die doel is om die bes moontlike beskerming te bied teen groen- en blou-skimmel.
2. Imasalil as sulfaat is pH sensitief. Residu lading word ook beïnvloed deur blootstellingstyd en temperatuur van mengsel. Konsulteer verskaffer of CRI vir leiding indien nodig.
3. Alternatiewe swamdoders kan gebruik word. Wees net bewus van elke produk se meng en temperatuur beperkings, bv. SC-formulasies sak uit, en verhitting van pirimetaniel mengsels sal lei tot verhoogde residue met moontlike MRL oorskeidings, veral op suurlemoene.

### Meng protokol

1. Vul water tenk tot 80% kapasiteit, en skakel pomp(e) aan.
2. Suspendeer swamdoders afsonderlik vooraf in lou water (35 – 40°C).
3. Volgorde van meng: SG - SC - EC - SL
4. Vul water tenk tot volle kapasiteit.
5. Sirkuleer mengsel ten minste vir 15 minute voor gebruik om volledige vermenging te verseker.

NB: Vir imasalilsulfaat, indien aanvanklike pH van water > 7, verstel EERSTENS na pH 7 VOOR byvoeging van imasalil. Die pH van imasalil mengsel moet nooit meer as 6 wees nie; pas pH aan indien nodig.

### Operasioneel

1. Meet konsentrasies minstens twee keer per dag indien metode beskikbaar is, en pas aan soos nodig volgens verskaffer se aanbevelings.
2. Vervang die mengsel MINSTENS een maal per week, verkieslik daaglik; saniteer toepaslik.
3. Mengsels wat vir meer as een dag gebruik word, kan gepasteuriseer word (sonder vrugte) deur tot 60°C vir 35 min te verhit en oornag af te koel voor gebruik.
4. Effektiewe blootstellingstyd moet aangepas word vir elke individuele kultivar en moet pH toepaslik wees.
5. pH en blootstellingstyd:
 

Bad	In-lyn
pH 3: 1 – 3 mins	pH 3: 8 – 15 s
pH 6: ≤ 45 s	pH 6: ≤ 8 s
6. Die mengsel se temperatuur kan varieer van 35 – 45°C. Die ideale temperatuur vir die bad is 35°C en vir die in-lyn behandeling 45°C.
7. Vir kort blootstellings periodes, moet mengsels verhit word.
8. Optimale mengseltemperatuur is ook afhanklik van die kultivar en spesifieke vrugsensitiwiteit.
9. Vir sagte sitrus word 'n pH van maksimum 5 voorgestel om oorlading van residue te voorkom.

For further specifications contact the suppliers of the above mentioned products.

**ALWAYS REFER TO PRODUCT LABELS FOR APPLICATION DETAILS.**

MRL list and restrictions: Visit [www.cga.co.za](http://www.cga.co.za) or email [ph@cga.co.za](mailto:ph@cga.co.za) for "RECOMMENDED USAGE RESTRICTIONS FOR PLANT PROTECTION PRODUCTS ON SOUTHERN AFRICAN EXPORT CITRUS"