


DX50[®]
 STABILISED CHLORINE DIOXIDE

Fungicide

CHLORINE DIOXIDE IN AQUEOUS DILUENT

What is Chlorine Dioxide?

Chlorine dioxide (ClO₂) is a true gas and a powerful oxidising compound that is effective against Bacteria, Fungi and viruses.

ClO₂ is selective in its nature when used against bacteria. Because of its electrical charge (MV 940) it can easily oxidise negative bacteria which have a lower charge (200mv). Beneficial bacteria (MV 1150) continue to operate unharmed.

Chlorine dioxide is also effective at breaking down biofilm, something Chlorine (Cl₂) cannot do.

Chlorine Dioxide as a fungicide

It is impossible to completely eradicate pathogens from our environment, in fact we don't want to. What we do want is to keep their damage 'below the economic impact line'.

Under the right condition's fungi, bacteria and viruses can explode and cause major crop damage, it is these events we need to control.

In aqueous solution 'DX50[®]' chlorine dioxide is an eradicator, designed to be used when conditions are optimum for pathogen infection of crops. Because ClO_2 is rapidly broken down under UV it is recommended to apply in the evening or at night, or in overcast conditions.

The benefits of having no residue is the ability to apply DX50[®] to crops and then harvest within 24 hours.





Chlorine Dioxide and Biofilm

Chlorine Dioxide is a *Bio-film disruptor*. It's unique mode of action cuts through the biofilm, exposing the bacteria to the deactivating work of the Chlorine Dioxide.

Another advantage of Chlorine Dioxide is that, unlike other bactericides and antibiotics, ClO_2 it is not subject to bacterial or fungal resistance. Because ClO_2 is broken down to simple Chlorite and Chlorate ions - at extremely low levels, residues are generally below the detectable level, and well below food safety requirements.



How safe is DX50[®] CLO₂ fungicide?

Chlorine dioxide has a gaseous nature and a strong smell in its concentrate form (1,500ppm) It is not however classed as a 'dangerous good' and is very safe to handle.

Even though CLO₂ is a strong oxidizing agent, there are no reports in scientific literature of toxicity by skin contact or ingestion. And with the no residue bonus allows for safe use across many applications.

DX50[®] has the highest environment rating achievable in New Zealand 9.1d



What can you use DX50[®] CLO₂ for?

DX50[®] will inactivate bacteria, fungal spores, moulds, biofilms and viruses, even at low concentrations.

DX50[®] is effective against a wide range of fungal diseases including Botrytis, Fire blight, powder mildew, brown rot and Stemphylium.

Because of its mode of action CLO₂ is not subject to disease resistance.

It can also be used to wash or bath produce in post harvest.



Where is DX50[®] from?

The process of having a long-lasting Chlorine dioxide product in solution was pioneered in New Zealand.

We manufacture DX50[®] using water from a very pure spring source in Golden Bay, home to some of the highest quality water in the world. If kept with lid secure between uses, and ideally at low temperatures out of direct sunlight, DX50[®] should remain stable for many months.

It is not uncommon to decant from larger drums over a 12 month period and still have 100% viability at the end.



Summary

The Chlorine Dioxide compound has many uses across a wide range of industries, it is quite literally an amazing chemical.

When used as a fungicide it acts as an eradicator with no residue which is fantastic in this world of agricultural chemicals we live in.

If you require a product that does the job, has positive health benefits and that is made with care in a pristine environment then DX50[®] is the one.