Hydra EBD

Eco Biocidal Disinfectant

Environmentally Friendly Disinfectant, Kills Legionella, Bacteria & Viruses - Fog, Spray or Soak

HYDRA®

Features & Advantages

Benefits of Hydra EBD Water Treatment

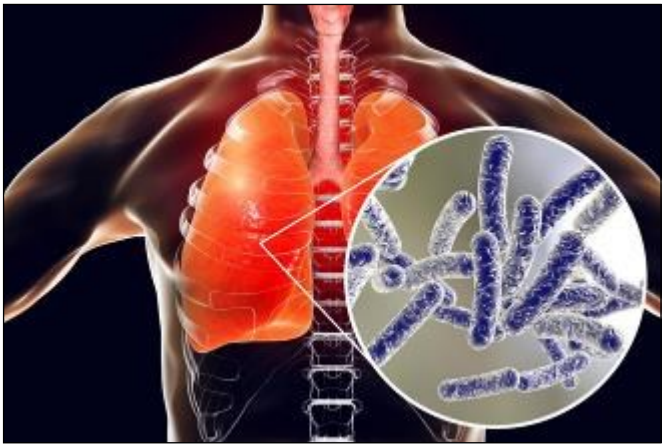
The benefits of using **Hydra EBD (**30% Hydrogen Peroxide) water treatment are numerous. We've listed the top advantages for various industrial facilities below:

- Effective against bacteria and other organisms including Legionella, Pseudomonas, Viruses including Coronavirus, Moulds, Yeasts, Fungi.
- Kills iron bacteria and prevents bacterial slime from building up.
- There's no trace of chemical residues because peroxide decomposes fully into water, no rinsing required.
- Because hydrogen peroxide integrates into water immediately, it's also biodegradable.
- Improves main and secondary filtration, even under conditions with high organic-loads.
- Cleans organic deposits from irrigation systems.
- Removes any odours from the water caused by hydrogen sulphide gas.
- Peroxide also removes hydrogen sulphide which is corrosive to plumbing and other fixtures. Meaning that peroxide is lower maintenance.
- Non-toxic, non-corrosive.
- Residue can go straight to drain.

The Problems

Legionella water treatment is an important issue because legionella are bacteria which can cause severe pneumonia know as legionnaire's disease. This bacteria inhabits water lines, air conditioners, air washers, fountains and cooling towers.

Usually legionella are harmless. They only become hazardous when optimal temperatures allow their populations to flourish and they are in aerosolising water systems where they can be inhaled.



Problems with using chlorine

Chlorination is the most commonly used chemical for water treatment. It's thought to be a safe method for removing microorganisms from water.

But it's now believed that the oxidation and disinfection process produces carcinogenic compounds.

Those carcinogenic compounds have been found in chlorinated water. They can be absorbed through our skin as well as inhaled. Beyond its dangers to human health, it's also bad for the environment.

Advantages of using Hydrogen Peroxide

Hydrogen peroxide is a high-level disinfectant. It doesn't pose the same risks to humans or the environment.

Hydra EBD is an oxidizing agent that works quickly to release oxygen atoms and oxidize organic matter.

It's able to rid of just as many microbial forms as chlorine but in a much safer way.

Description

Hydra EBD is a stabilised hydrogen peroxide (H_2O_2) solution, it is a very effective biocidal agent, meaning that it kills all types of microorganisms when it comes into direct contact with them.

Hydrogen Peroxide is a strong oxidising agent and it kills microorganisms through this mechanism. It is used in all heavy duty applications where a 100% kill rate must be guaranteed.

The hydrogen peroxide molecule is by nature unstable, in that it will easily "fall apart" or dissociate into sub-components under ambient conditions.

The elemental oxygen (O_2) seperated by the hydrogen peroxide, attacks the cell walls of all micro-organisms directly.

This chemical reaction between the oxygen and the cell wall molecules cause these to be denatured and destroyed. Eliminating any possibility of resistance by the micro-organism.

HIGHLY EFFECTIVE
Effective against highly contagious germs like Bacteria, Moulds, Yeasts, Fungi and other organisms including: Legionella, Pseudomonas, Viruses (all types), including Coronavirus, Viruses Enveloped (influenza, coronavirus etc).

And beyond these benefits, **Hydra EBD** hydrogen peroxide water treatment is also environmentally friendly.

It doesn't pollute water soils or harm aquifers.

In fact, it actually makes more oxygen for plants and soil to consume.

WHERE TO USE
Storage tanks and cisterns.
Emergency water disinfection.
Surface treatment of pipes and water tanks.
Portable water tank disinfection.
Municipal water stems and plants.
Automatic irrigation systems.

USED BY
Medical and Healthcare industries. Hospitality. Remediation of water damage. Meat and fish processing. Mould remediation.

Disinfection against Covd-19, bacterial endospores and a broad protozoan spectrum (bactericidal, mycobactericidal, tuberculocidal, virucidal, fungicidal, sporicidal).

APPLICATIONS
Surface disinfection, aerosol disinfection, room disinfection via vaporisation (VH_2O_2) fogging machines, spray disinfection, mould control.

ENVIRONMENTALLY FRIENDLY
When **Hydra EBD** is diluted with water the hydrogen peroxide molecule becomes unstable and will dissociate into its component parts which are water and oxygen.

Therefore there are no residues on disinfected surfaces and nothing to harm the environment, in soak tank applications used product can go straight to drain.

DILUTION
When making a working solution, always use this diluted solution within 24 - 48 hours.

How To Use

Water Pipes & Tanks Disinfection, Cooling Tower, Air Washer, Irrigation System
Shock Treatment: 2000ml/m³.
Maintenance Dose: 50-1000ml/m³.
Leave to stand for minimum 4 hours or overnight.
Instructions are on next page.

Fogging (Dilute 1: 5.7 = 15% solution)
Cold Fogging: Use 8-15ml/m³ exposure min 2 hours.
Hot Fogging: Use 10-20ml/m³ exposure min 2 hours.

Surface Disinfection
Average organic load: 1:30 (3%).
Heavy contaminated surfaces: 1:15 (6%).
Highly contaminated areas with high organic load, to eliminate viruses and endospores 1:10 (10%).

Exposure Times:	3%	10%
Bacteria	15 min	5 min
Yeasts	15 min	5 min
Viruses Enveloped	0.5 min	0.5 min
Viruses Non-Enveloped	——	30 min
Spores	——	60 min

Laboratory Facilities

Hydra International Ltd.'s Research & Development Laboratories are a hub of activity where new products are developed and formulated.

We have working relationships with our raw material suppliers, many of these suppliers are major world-wide chemical manufacturers with their own development laboratories.

As a company we are well known in the chemical industry for being receptive to cutting edge new chemicals which can be incorporated into our products to achieve performance advantages.

An important part of the International Standards that we hold is that of constant improvement.

We show that we have achieved this at every independent audit.

Cleaning Water Storage Tanks

Drain the tank to the designated drain.

Under normal operation, the float-operated valve is a restriction within the supply pipework and so should be operated fully open, flushing any particulate matter from the supply main.

Physically clean the tank and associated fittings using a method that does not damage the tank coatings. It may not be possible to clean galvanised tanks where there is evidence of corrosion.

Remove residual sludge and water by using a wet and dry vacuum cleaner, disposing to the designated location, and rinse the tank with fresh water.

Disinfection

Place signage on all water outlets, warning not to use whilst disinfection is in progress.

Refill the tank with fresh make-up water, isolate from the mains supply and add the required quantity of HYDRA EBD using the turbulence of filling to distribute it.

Test the contents of the tank to confirm the required level of disinfectant has been achieved using the HYDRA EBD Test Strips, reading should be a minimum of 600ppm.

Draw the disinfecting solution through to the water heaters and subsequently to all outlets fed from the system.

Test key far sentinel outlets to ensure the required concentration is reached.

Test all other outlets with the the HYDRA EBD Test Strips showing the presence or absence of disinfectant.

Top up the tank with fresh water and sufficient disinfectant to bring the concentration back up to target levels. Leave the system for minimum of 4 hours or overnight.

Retest key outlets at the end of the contact period to confirm that satisfactory disinfectant levels are achieved.

Check concentrations at intervals during the contact period and restore the disinfectant levels if they decline. If the concentration should fall below the minimum, restart the process.

Flush the complete system with clean water.

Using HYDRA EBD Test Strips measure each water outlet to ensure a maximum residue of 25ppm HYDRA EBD.

Remove signage and outlet warning labels.

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