

HuwaSan TR20 Disinfection of Commercial Water Systems

What: HuwaSan TR20

Where: Commercial Water Systems. By 'commercial', we mean water tanks between 200L and 10000L in volume. So, places such as large Nursing and Care Homes, schools and office blocks.

When: The best time to disinfect any water system is when you know that it won't be used for around 12 hours - for example, after all the morning washing routines are done and out of the way. This allows you to apply HuwaSan TR20 in a relatively undisturbed way.

Why: HuwaSan TR20 disinfects water systems and kills legionella bacteria. There are no strict rules as to how often you should disinfect your water system, but we'd recommend that you inspect the system annually, and disinfect if required. This ensures that your property remains HSG 274 Part 2 compliant. (The Control of Legionella Bacteria in hot and cold water systems)

How:

Step 1) You first of all need to know how much water you're disinfecting. You do this by finding the volume of the cold water tank, the calorifier and the pipework combined. **Tank:** the volume is normally printed on the label; if it's not then you have to multiply the length x height x width to get the volume.

Calorifier and pipework: if you have a calorifier, multiply the tank volume by 1.3... if you don't have a calorifier, multiply the tank volume by 1.1.

Step 2)

Water system volume	Amount of HuwaSan TR20 needed
200 litres	100 ml
500 litres	250 ml
1000 litres	500 ml
5000 litres	2500 ml
10000 litres	5000 ml

Step 3) Isolate the tank from the mains water supply, drain and thoroughly, manually clean the inside. Residue can be removed with a wet & dry vacuum cleaner. **Note:** if you can't isolate the tank from the mains water supply, then you can omit step 3.

Step 4) Fill the cold water storage tank with fresh water and dose the tank with the recommended amount of HuwaSan TR20.

Step 5) Open the hot and cold taps **furthest** from the cold water tank and let the water run for one minute.

Step 6) Check the water from these taps with a hydrogen peroxide test strip. You're looking for hydrogen peroxide levels of more than 100ppm, so use the colour guide on the test strips to help you.

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Step 7) If the test strip shows hydrogen peroxide levels of more than 100ppm, great – you can now draw the HuwaSan TR20 through the entire system by opening up different pairs of taps, checking that each has a hydrogen peroxide level of more than 100ppm. Flush all of the WC's too. If the test strip shows hydrogen peroxide levels of less than 100ppm, you need to add more HuwaSan TR20 to the water tank and repeat. A lower hydrogen peroxide level, indicates a dirtier water system.

When adding more HuwaSan TR20, please follow the table below if the test strip shows hydrogen peroxide levels of:

System Volume (litres)	Peroxide 25ppm (further peroxide addition in ml)	Peroxide 50ppm (further peroxide addition in ml)	Peroxide 75ppm (further peroxide addition in ml)
200	75	50	25
500	187.5	125	62.5
1000	375	250	125
5000	1875	1250	625
10000	3750	2500	1250

Step 8) After checking all outlets are showing 100ppm or more, the furthest outlet should be rechecked. If the reading is the same, you're done. After 24 hours of normal usage, your water system will be completely disinfected. If you need water samples for any reason, do wait until after this initial 24 hours for accurate results.

NOTE: In the first 12 hours after disinfection, you may notice discoloured water or pieces of biofilm coming through taps. This will subside.

And finally: If the system has a history of persistent legionella bacteria, you can increase the HuwaSan TR20 dose in order to achieve a 1000ppm hydrogen peroxide level, but the system **must be** taken offline first. This level of hydrogen peroxide will get rid of resistant biofilm quickly and effectively but is **not** safe to be used by people – once 1000ppm is achieved at all outlets, leave it for one hour; then run water through the system until the levels are back down to 100ppm at all outlets.

HuwaSan TR20 Health and Safety

SAFESOL advocates the use of appropriate safety equipment when using any chemical. Please refer to the MSDS sheet prior to use.

In hospitals, never do an HuwaSan TR20 disinfection if there's a dialysis unit or laboratory linked to the water system or if there's the possibility of HuwaSan TR20 getting into the water supply to these units.

Before using any chemical, you should always reference your in-house Risk Assessments and Method Statements.

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