

Using a fogger for COVID-19 Sanitisation

Foggers, or fogging machines, dispense chemicals into the atmosphere in a very fine mist (known as a fog) which then settles on all exposed surfaces.

Foggers can be used for disinfecting and sanitising, odour control, pest control and mould treatment, however in 2020 fogging has come into its own as a quick and effective way to sanitise rooms and surfaces for protection against the spread of COVID-19.

COVID fogging machines

There is now a wide range of fogging machines available for domestic and commercial use. COVID fogging machines are standard chemical foggers, used with an approved disinfectant which has been tested to prove its effectiveness in killing germs and viruses.

What is fogging cleaning?

Technically, fogging isn't cleaning as it doesn't remove any dirt and grime – it's a process used for sanitising and disinfecting. Always clean surfaces with standard cleaning solutions or soap and water before fogging. Viruses and bacteria can hide inside or below dirt and organic material which will reduce the effect of the disinfectant.

Fogging is useful as part of an overall COVID risk management system. It enables disinfection of large areas as part of a deep clean, rendering areas safely disinfected. Whilst fogging can eliminate viruses on treated surfaces, it cannot guarantee ongoing protection once a room is recommissioned, so the process should be repeated on a regular basis.

Safe Indoor Chemical Fogging

When carried out correctly, fogging applies disinfectant to the air in a room, which then settles on all exposed surfaces everywhere in the space, something that would be extremely difficult to do manually, and would inevitably create a high level of exposure to the chemical. The fogging process works in just a few minutes and can be achieved with minimal personal exposure to chemicals.

During fogging the air in the room is filled with a minute dispersion of disinfectant, so there is a risk of exposure to lungs, eyes and skin. We recommend that the fogging operator should use PPE, e.g. 3ply face mask, eye protection, overall, gloves and shoe protection when using a fogging machine. Only the operator should be in the room when fogging takes place.

How long does it take to fog a room?

Depending on the size of the room, foggers take around 5 minutes to complete the job. Hand held or back-pack foggers are recommended for COVID-19 sanitisation, and the best approach is to work from the furthest point of the room back to the exit, then leave the room, close the door and wait for around 30-60 minutes to allow the fog to dissipate and settle on the contact surfaces, after which time the room will be ready to use again.

The exact settling time, i.e. how long before it's safe to re-enter treated areas will depend primarily on atmospheric conditions and the properties of the fogging machine used, so if in doubt, check the manufacturers' instructions and leave a little longer before allowing people to re-enter the room.

Ongoing COVID-19 sanitisation and hygiene management

Wherever there is human contact with surfaces and in particular touch points (e.g. door handles, desk tops and worktops, light switches etc), it is important to establish a routine of periodic cleaning and disinfection, with regular surface wiping in between deep cleans, which would include a combination of steam cleaning and fogging.

Guidance from the World Health Organisation with respect to management of the COVID risk in hospitals recommends that high contact surfaces in shared/high traffic areas should be cleaned twice daily and shared toilets three times a day. This is a useful rule of thumb for other environments.

Is the area suitable for fogging?

For chemical fogging to be effective and safe, consider the following points:

- Is the area self-contained with no open areas, so that the fog can be contained? You might need to tape up any wall vents or large gaps around doors.
- Is it an area where access can be limited during treatment?
- Are there any objects, furniture or obstructions that might prevent effective coverage of the fog?
- Are there any sensitive items of equipment or plants that might be harmed and might need to be protected or removed?

Different types of fogger

There are 2 main types of chemical fogger:

Thermal foggers have a heating coil which vaporises the chemical into a very fine cloud (with a particle size which can be as low as 1-5 microns. Extra care is needed when using a thermal fogger, due to the heating element and these are usually used in industrial environments or outdoors – not recommended for COVID-19 treatments.

Ultra-low volume (ULV foggers) are cold foggers with an electric motor and fan which forces air into the chemical, producing a fine fog, with a droplet size of approx. 20 microns – suitable for COVID-19 sanitising.

Tips for using chemical foggers

- Make sure that the fogging machine operator has appropriate PPE and, as some foggers can be noisy, ear protection might also be needed.
- Always clean surfaces with standard cleaning solutions or soap and water before fogging. Viruses and bacteria can hide inside or below dirt and organic material which will reduce the effect of the disinfectant.
- Read the fogging machine's instruction manual before using the machine to ensure that you are familiar with the correct way to operate the fogger and know the fogging distance.
- Also make sure you know how to use the disinfectant – e.g. does it require dilution or is it ready to use? Diluting a chemical which doesn't require it could render it ineffective
- The exact chemical usage will depend on the fogging equipment being used; generally, 1 litre of fogging chemical is sufficient for 100m³ of room volume.
- Electrical items and air-conditioning or ventilation systems should be switched off. (Smoke alarms do not need to be covered).
- It is important to remove food, crockery, cutlery etc before fogging. After fogging rinse/wipe down any treated food contact surfaces with a clean, damp cloth.
- Foggers can be used with different chemicals, e.g. disinfectants, insecticides or odour control solutions. When switching chemicals, run the fogger with clean water and rinse thoroughly
- If your fogger has an air filter and / or liquid filter, clean these periodically by washing and rinsing with running water
- Electric foggers should be unplugged after use and kept in a dry place, away from heat sources
- In a business environment, we recommend writing clear procedures for the disinfection process to ensure consistent practice.

Additional notes:

We recommend the use of Super Antiviral Disinfectant, which kills a range of pathogenic viruses in minutes. This is supplied at the optimum concentration to make it effective against viruses, but not so high that it creates a risk to people using the space once it has been recommissioned.

Chemical fogging operations performed by professionals are subject to the COSHH Regulations. Employers have a responsibility to conduct a COSHH Risk Assessment and implement all necessary precautions to eliminate the possibility of human exposure to chemicals in use. Safety Data Sheets are available to support employers' compliance with COSHH.

Where a risk assessment identifies the possibility of inhalation of chemical fog, consideration should be given to use of FFP3 quality moulded disposable mask that offers a high level of protection against fine dust, fibres and water-based mists.

Under no circumstances should fogging be used on people or animals.

We have a range of chemical fogging equipment available which you can see on our website, and if you need some advice, please give us a call.

[See all chemical fogging machines available from B&G here](#)

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