

# What is electrostatic technology and how is it used in the cleaning industry?

Well, let's start off by clearing up a common misconception, cleaning is not disinfecting and disinfecting is not cleaning. Cleaning involves removing dirt, germs, and impurities from surfaces while disinfecting involves killing germs and pathogens so they are unable to reproduce.

## What is Electrostatic Disinfecting and How Does it Work?

Electrostatic sprayers are an application system used to apply a disinfection solution to surfaces that have already been cleaned. This is done by using an electrostatic applicator that gives a negative charge to the disinfecting solution as it exits the nozzle. The charged molecules have a charge strength greater than gravity and will attract to the targeted surface very quickly. This not only results in uniform coverage but provides a safe application where the chemical is not lingering in the air as is the case with aerosol cans, traditional spray bottles and foggers.

The science behind it is detailed, but in the simplest of terms, electrostatic disinfecting works by providing a charge to a solution so that it electromagnetically sticks to a targeted surface, providing 360-degree coverage.

In most instances, surfaces are neutral, so when an electrostatic disinfecting system, provides a negative charge to the solution, said solution will be attracted to a surface with a different polarity. If you want to get even more technical, this is an example of Coulomb's Law. It's also how the automotive industry has evenly and accurately spread spray paint onto cars for decades.

### **Why Is Electrostatic Disinfecting So Effective?**

Harmful pathogens can live on surfaces for days, and will potentially double every 20 minutes given the right food source and temperature. Conventional cleaning and disinfecting does a fine job of managing microbiological load on common touch points. However, the evolutionary flexibility of modern pathogens is such that we need to add new strategies to manage cross contamination and microbial load in facilities well beyond acute care. Electrostatic disinfecting provides a broad-spectrum approach to disinfecting a complete surface area and an entire room as we have never seen before.

### **Why should you use electrostatic technology to disinfect?**

Cleaning is a necessary and important first step in the disinfection process, but it's impossible to disinfect 100% of a surface area with standard procedures. Germs and bacteria spread into hard-to-reach surfaces and reproduce.

Imagine trying to apply a disinfecting solution to all the nooks and crannies that exist in a hospital, or trying to completely saturate all surfaces of equipment in a fitness center or toys in a daycare. Additionally, let's take a look at offices, which is another critical cleaning environment. There are a vast number of hard-to-reach areas that are potentially covered in pathogenic bacteria, like keyboards, phones, and desks.

Electrostatic disinfection is the magic bullet that healthcare and public infection control has been waiting for. Electrostatic technology provides a step that will greatly improve current infection control programs by maximizing coverage of each surface area to be disinfected while eliminating the spread of pathogens.