Case Study

Staying Healthy:
Your Surface Environment

Polyvision®

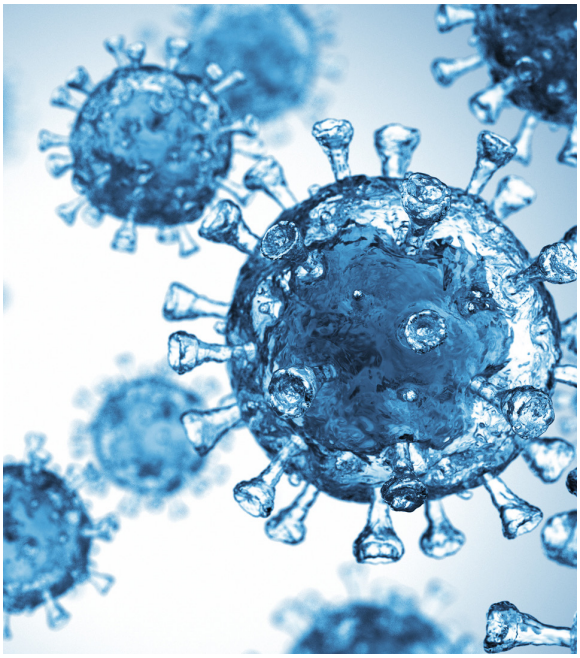
Introduction

In the thick of cold and flu season, it's important to disinfect the surfaces you may not typically think of. In classrooms around the world, students and teachers put their hands on the board at least once every day, depositing the germs half of the class took home in the previous week, or the stomach bug Johnny picked up at his friend's house over the weekend. Not only are schools challenging environments for controlling the spread of illness, but the workplace can also be a breeding ground for germs. Employees bring bacteria and sickness to the office before knowing they could be spread to others, and then use shared collaborative worktools and supplies such as frameless dry erase boards. If these surfaces are neglected, they can quickly spread illnesses throughout the workplace.

The struggle to contain bacteria and virus-borne illnesses isn't exclusive to school and work. Healthcare institutions big and small face stronger, even more resilient germs. Healthcare-associated infections (HCIs) are picked up by patients already in hospital or other healthcare situations and can prove more serious than the initial reason for care. They're often more resistant to treatment than typical bacterial infections, so prevention is key. There are studies showing that with proper prevention procedures in place, the risk of contracting HCIs can be reduced by up to 70 percent. These procedures include routinely disinfecting hard surfaces and regular hand washing.

A study by the National Center for Biotechnology Information (NCBI) shows that the surface environment can contribute to the spread of HCIs – previously associated primarily with intravenous and surgical procedures. In healthcare, education and the workplace, writing surfaces are an integral part of the environment. Understanding the microbiological properties of your whiteboard or chalkboard surfaces and implementing best practices for disinfecting them can go a long way to preventing the spread of illness, just like washing your hands.

A lot of manufacturers claim their markerboards and chalkboards are antimicrobial or antibacterial, but what does that mean? If their materials had these properties, the surface would kill off germs just like hand sanitizer does for your hands. While surfaces like glassboards and porcelain enamel whiteboards and chalkboards don't allow these organisms to flourish, they don't have the natural ability to act as a self-disinfectant. However, porcelain enameled writing surfaces (also known as vitreous enamel or CeramicSteel) do act as what are called bacteriostatic surfaces – which means the surfaces are like limbo for bacteria and viruses. So, while nonporous whiteboard surfaces like CeramicSteel don't kill microbes, they do inhibit growth and reproduction. CeramicSteel's smooth, nonporous surface and resistance to scratching are to thank for its resistance to germs – any microorganisms which make their way onto the surface remain stagnant, unable to spread or develop into bigger colonies.



Microscopic organisms will find any uneven surface to latch onto, and imperfections on a whiteboard or chalkboard are great places for them to sit undiscovered – and unreachable – when the surface is cleaned. Writing surfaces like whiteboard paint, melamine and laminates have a rougher "orange peel" texture, allowing germs to settle into the surface. Since CeramicSteel doesn't provide this opportunity, bacteria are forced to sit on top of the surface without the nutrients needed to grow. Aside from being bacteriostatic, CeramicSteel is also bacteria resistant which means the surface is completely inorganic and cannot be broken down and used as a source of nutrition by microbes. This makes it easy to clean away bacteria that may have transferred to whiteboard and chalkboard surfaces through the air or physical contact.

Some whiteboard surfaces like paint, melamine and laminates are less durable, unable to withstand the use of harsh cleaners. The top layer that makes them a dry erase surface will wear away and render them unusable over time. However, CeramicSteel surfaces can tolerate frequent cleaning, even with abrasive or strong disinfectants. Because CeramicSteel's surface won't sustain damage from extensive cleaning, it's safe to disinfect the surface daily in environments like education, healthcare and the workplace where germs can run rampant.

PRO TIP: If you're going to use a disinfectant, we recommend following up by cleaning your surface with warm soapy water before rinsing with clean water and wiping it dry to remove any filmy residue the disinfectant may leave behind on the surface.

Polyvision Americas

10700 Abbotts Bridge Road
Suite 100
Johns Creek, GA 30097 USA

T 1 888 325 6351
E info@polyvision.com

Polyvision Europe

Zuiderring 56
3600 Genk, Belgium

T +32 89 32 31 30
E EMEAsupport@polyvision.com

Polyvision Asia-Pacific

15th Floor, Kinwick Centre
32 Hollywood Road, Central District
Hong Kong

T +852 2520 0160
E APACsupport@polyvision.com

e³ CeramicSteel

Polyvision®

polyvision.com

04-13-2023