

Passive vs Active Antimicrobial Flooring

With sanitation standards and cleanliness ever so important, hygiene and antimicrobial properties has become a major factor of consideration when selecting new floor finishes.

Many flooring companies claim to have antimicrobial floors, without reengineering their coatings to incorporate antimicrobial technology. This is because materials like epoxy and polyurethane cement floors, with hardwearing resin systems, naturally do not encourage bacterial growth. As long as the flooring has no gaps, cracks or pinholes, such coated floors do not assist bacterial growth and make the floor somewhat antimicrobial. Therefore, such claims by certain flooring companies are somewhat true. However, it is not enough.

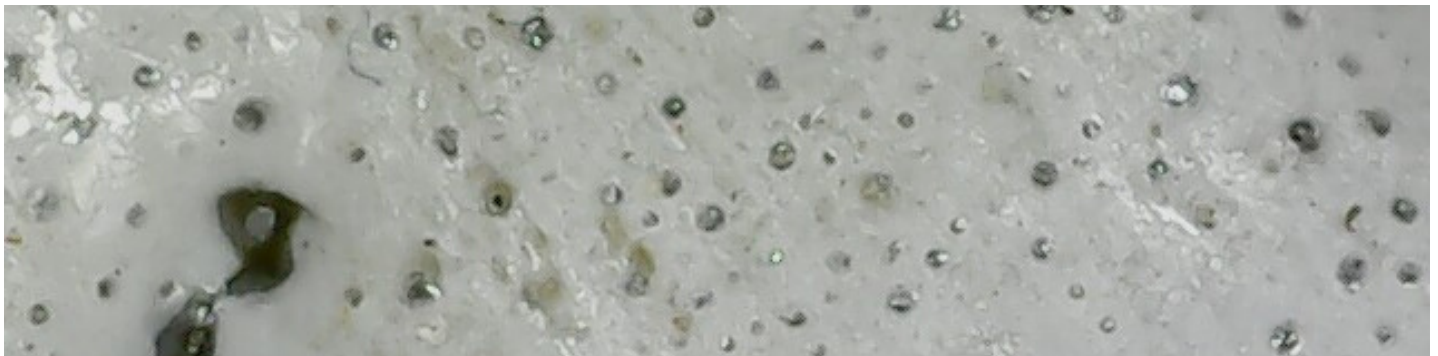
Such floors are only **passively antimicrobial**. This means that while they naturally hinder bacterial growth, wear and tear in a busy food plant through heavy equipment and processing can damage the floor finish and coat and lead to an increased risk of unwanted bacteria.

Active antimicrobial technology involves both the antimicrobial agents (silver, zinc, triclosan) and the method of application to eliminate pinholes in the floor. Achieving the correct percentage of antimicrobial agents in the floor is vital for it to last the entire floor lifetime and be truly effective in eliminating bacteria growth. The method of application is similarly just as vital. Without alterations to the typical floor coating, epoxies and polyurethane cement floors will likely have pinholes (see image above). While not visible to the naked eye, these pinholes are a potential location for bacteria to grow.

So what is the key difference?

A **passively antimicrobial floor** only discourages bacteria growth; it won't fight against any bacteria. So while it isn't the best place for bacteria to grow, it's not going to do anything to stop bacteria from growing on it's surface.

An **actively antimicrobial floor** is a floor that has the right level of antimicrobial agents and additives, incorporated at the right time, through modified techniques and therefore actively fights against bacteria growth.



A magnified image of a passively antimicrobial floor, showing pinholes

Additional Reading:

Visit www.alliedfinishes.com/resources to view the following:

- SteriFloor Brochure
- eBook: Understanding Bacteria Growth in the Food Manufacturing Industry