

# ANTI-MICROBIAL DOES NOT MEAN DISINFECTANT-READY

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WHITE PAPER



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## Introduction

Two facts are very clear in the medical field: equipment is expensive and it must stay clean. It naturally follows then that if purchased equipment cannot withstand the variety of harsh chemical cleaners used in hospital settings, it quickly goes from an investment aimed at bettering patient care to an expensive mistake.

Barcode readers have proven to be an invaluable resource in hospitals world-wide, but it can be a challenge finding devices that complement each hospital's work environment while withstanding the harsh cleaning necessary for infection control. For some, anti-microbial plastics would seem the cleanest solution; however, there are many misconceptions surrounding what anti-microbial plastics offer compared to disinfectant-ready plastics.

Code uses high-performance plastics vs. consumer grade (monitors, keyboards, etc.) and offers a three level identification of its disinfectant-ready products to help customers make the best choice for their environment, helping them to avoid what could be a very expensive mistake.

## Hospital-Acquired Condition (HAC) Reduction Program

"In 2012, 1 out of every 8 patients nationally suffered a potentially avoidable complication during a hospital stay." Though progress has been made, it has not happened as fast as federal health officials would like<sup>(1)</sup>. Centers for Medicaid and Medicare Services defines HACs as "a group of reasonably preventable conditions that patients did not have upon admission to a hospital, but which developed during the hospital stay".<sup>(2)</sup>

Under the Affordable Care Act, infection containment and reducing HACs has become a major focus. Medicare is going to begin a series of hospital evaluations, look at several HAC prevention areas, and assign each hospital a "HAC score". As of October 1, 2014 as part of the HAC Reduction program, Medicare may penalize Hospitals with an insufficient HAC score.<sup>(3)</sup>

According to Ann Farrell, Principal Farrell Associates, HealthIT Consulting, LLC, "Financial penalties are driving C-Suite focus on infection control. While HACs are multi-factorial, there is a growing awareness of the role devices taken room-to-room

play in infection prevention. These concerns have contributed to the rising number of in-room point of care device strategies and increasingly influence device vendor selection." With this increased focus on infection control, it is important to have durable plastics that can withstand the harsh chemicals needed to promote infection containment and decrease HACs.

## Anti-Microbial vs. Disinfectant-Ready

According to Madison Group, an independent plastics testing company, sacrificial additives wear away with time, meaning the plastic ceases to resist bacteria after prolonged use. Because anti-microbial additives are not inherent in the molecular structure, they weaken the plastic composition.

In an interview for Plastic News, Manish Nandi, Senior Product Developer for Sabic Innovative Plastics, gave some insight on anti-microbial plastics. He mentioned that they are not a "cure-all" for disinfection and that "the primary control is still going to be cleaning" with the anti-microbial additives acting as a sort of insurance policy.

The problem with this "insurance policy" is that it may or may not account for substances used to clean the device. In reference to the harsh chemicals used to disinfect devices, Nandi had this to say "to kill these really resistant bugs, they are coming up with harsher and harsher chemicals. And that is putting pressure on folks like us who are making the materials and surfaces because these materials are not friendly to the harsher chemicals".<sup>(4)</sup>

Customers who choose anti-microbial devices could potentially pay extra for a device that over time is no longer anti-microbial and/or has deteriorated from repeated exposure to harsh chemicals. This leaves them with expensive repair and replacement costs. Disinfectant-ready materials will not break down when disinfected. The purpose of these chemical compositions is to withstand different levels of harsh chemical cleanings. Disinfectant resiliency strength varies from product to product in order to accommodate different microorganism levels of control. Manufacturers have different disinfectant chemical composition in order to attack microorganisms in different ways and not all disinfectant-ready plastics are made equal.

## What Code Offers

Code has recently assigned levels to its Disinfectant-Ready Plastics products: Levels 1, 2 and CodeShield™ (Level 3) in order to help customers choose the product best suited for their circumstance. The higher the level, the more resistant the plastic is when exposed to harsh chemical cleaners used in healthcare environments.<sup>(5)</sup>

CodeShield™ is quickly emerging as the most durable solution to disinfectant-ready devices, having been tested and proven to withstand more cleaning agents than any other competing product. In a press release announcing the new classification system, Garret Russell, vice president of sales and marketing at Code, said the following: "Code has set the standard by assigning this detailed level of categorization to a healthcare product line. CodeShield™ represents our commitment to provide quality products that exceed the demands of our customers".<sup>(6)</sup>

## Conclusion

Plastics injected with anti-microbial additives resist growth of bacteria for an undetermined period of time, but that does not eliminate the need to clean the device. Disinfectant cleaners degrade plastics that do not contain a disinfectant-ready chemical composition. Anti-microbial or not the CDC recommends "Adequate cleaning and disinfection of equipment and environment" as part of infection control.<sup>(7)</sup>

For unrivaled durability, Code recommends one of its three levels of disinfectant-ready devices designed to withstand varying levels of chemical disinfectants allowing the customer to make a sound investment when it comes to their devices.

### Sources

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