

Disinfectants and Chemical Reagents Testing

KYDEX® T, KYDEX® 100, and KYDEX® 430

SEKISUI SPI supports the Medical Devices Market by providing products that hold up to the daily rigors of medical facilities, severe disinfectants, and chemical reagents.

KYDEX® Thermoplastics are manufactured from a blend of polymers that are robust, impact and wear resistant, and are unaffected by harsh cleaners and disinfectants, making them an ideal solution for the Medical Device Market. In today's medical environment, the use of aggressive cleaning agents and disinfectants is critical in eliminating surface bacteria and viruses to reduce the risk of infection. These chemical reagents have been known to have an adverse effect on materials, causing discoloration, brittleness, and/or product failure.

Virex® Tb

SEKISUI SPI was challenged by a major Medical Device OEM with testing the chemical compatibility of the cleaning agent, Virex® Tb, on KYDEX® Thermoplastics. This manufacturer uses Virex® Tb as their "litmus test" on substrates when considering them for the design of medical and diagnostic equipment. SEKISUI SPI conducted compatibility testing on several grades of KYDEX® Thermoplastics with Virex® Tb using the following standard test procedures.

Testing

A variety of samples underwent the following contact testing with Virex® Tb: *stressed tensile bar*, *submersion*, *continuous contact*, and *wipe down*. SEKISUI SPI conducts testing based on the ASTM D543 standards and meets or exceeds their practices for evaluating the resistance of plastics to chemical reagents.

Conclusion

After 28 days of testing, the results showed Virex® Tb can be used as a disinfectant cleaner on KYDEX® T, KYDEX® 100, and KYDEX® 430 without any harmful effects.

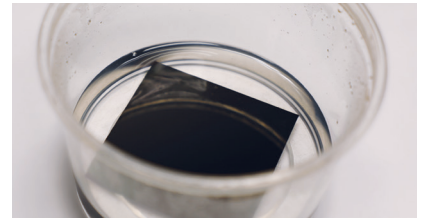
Additional Testing

KYDEX® T, KYDEX® 100, and KYDEX® 430 underwent testing with a range of disinfectants and chemical reagents commonly used in hospitals and medical facilities.

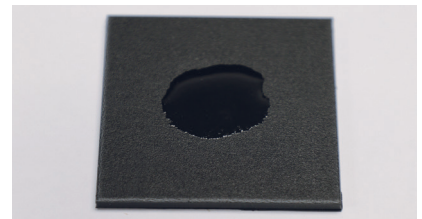
Stressed Tensile Bar Testing



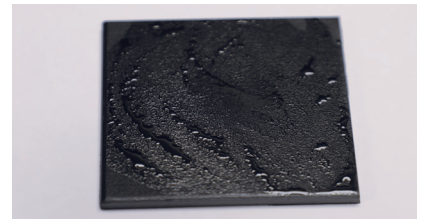
Submersion Testing



Continuous Contact Testing



Wipe Down Testing



No adverse effects observed after 28 days.

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Cleaner	Manufacturer	Active Technology
CIDEZYME® GI Enzymatic Detergent	Advanced Sterilization Products	Subtilisin (proteolytic enzymes)
ENZOL® Enzymatic Detergent	Advanced Sterilization Products	Subtilisin (proteolytic enzymes)
Ball-Phene	Ball	Phenolic
Clorox® Disinfecting Spray	The Clorox Company	Quaternary ammonium compounds
Dispatch® Hospital Cleaner Disinfectant Towels with Bleach	The Clorox Company	Sodium hypochlorite
Sporicidin Disinfectant Solution	Contec	Buffered phenol
Sporicidin Disinfectant Towelette	Contec	Buffered phenol
Citrusolve Cleaner Degreaser	Lawrason Inc.	d'Limonene
MediClean EZ™	Medivators	Subtilisin (proteolytic enzymes)
Rapicide™	Medivators	Glutaraldehyde
Rapicide PA®	Medivators	Peracetic acid
CaviCide™ AF	Metrex Research, LLC	Quaternary ammonium compounds
CaviWipes™ Bleach	Metrex Research, LLC	Sodium hypochlorite
Caviwipes™	Metrex Research, LLC	Quaternary ammonium compounds
Caviwipes1™	Metrex Research, LLC	Quaternary ammonium compounds
PDI Sani-Cloth AF3 Germicidal Disposable Wipe	Professional Disposables International, Inc.	Quaternary ammonium compounds
Lysol® Brand Disinfectant Concentrate	Reckitt Benckiser, LLC	o-Benzyl-p-chlorophenol
Professional Lysol® Brand Disinfectant Spray	Reckitt Benckiser, LLC	Quaternary ammonium compounds
Hepacide Quat II	Spartan Chemical Company, Inc.	Quaternary ammonium compounds
CIP 100®	Steris Corporation	Potassium hydroxide (alkaline-based)
CIP 200®	Steris Corporation	Phosphoric acid/citric acid (acid-based)
CIP 220®	Steris Corporation	Glycolic acid (acid-based)
Coverage Plus NPD	Steris Corporation	Quaternary ammonium compounds
Environ® LpH® st	Steris Corporation	Phenolic
LpH® se	Steris Corporation	Phenolic
Spor-Klenz®	Steris Corporation	Hydrogen peroxide/ peroxyacetic acid
Vesphene II SE	Steris Corporation	Alkaline phenolic
DECON-CYCLE	Veltek Associates, Inc.	Phenolic
DECON-PHENE	Veltek Associates, Inc.	Phenolic

Results

The results of the testing confirmed that KYDEX® T, KYDEX® 100, and KYDEX® 430 are not affected by any of these cleaners and disinfectants.

Conclusion

SEKISUI SPI KYDEX® Thermoplastics stand up to a range of hospital-grade disinfectants and cleaners without loss of surface finish, color fastness, or degradation of mechanical and physical properties.

For more information about SEKISUI SPI and our line of KYDEX® Thermoplastics, and to see if KYDEX® Thermoplastics are compatible with your "litmus test" disinfectant, contact your local representative or visit us at www.sekisui-spi.com.