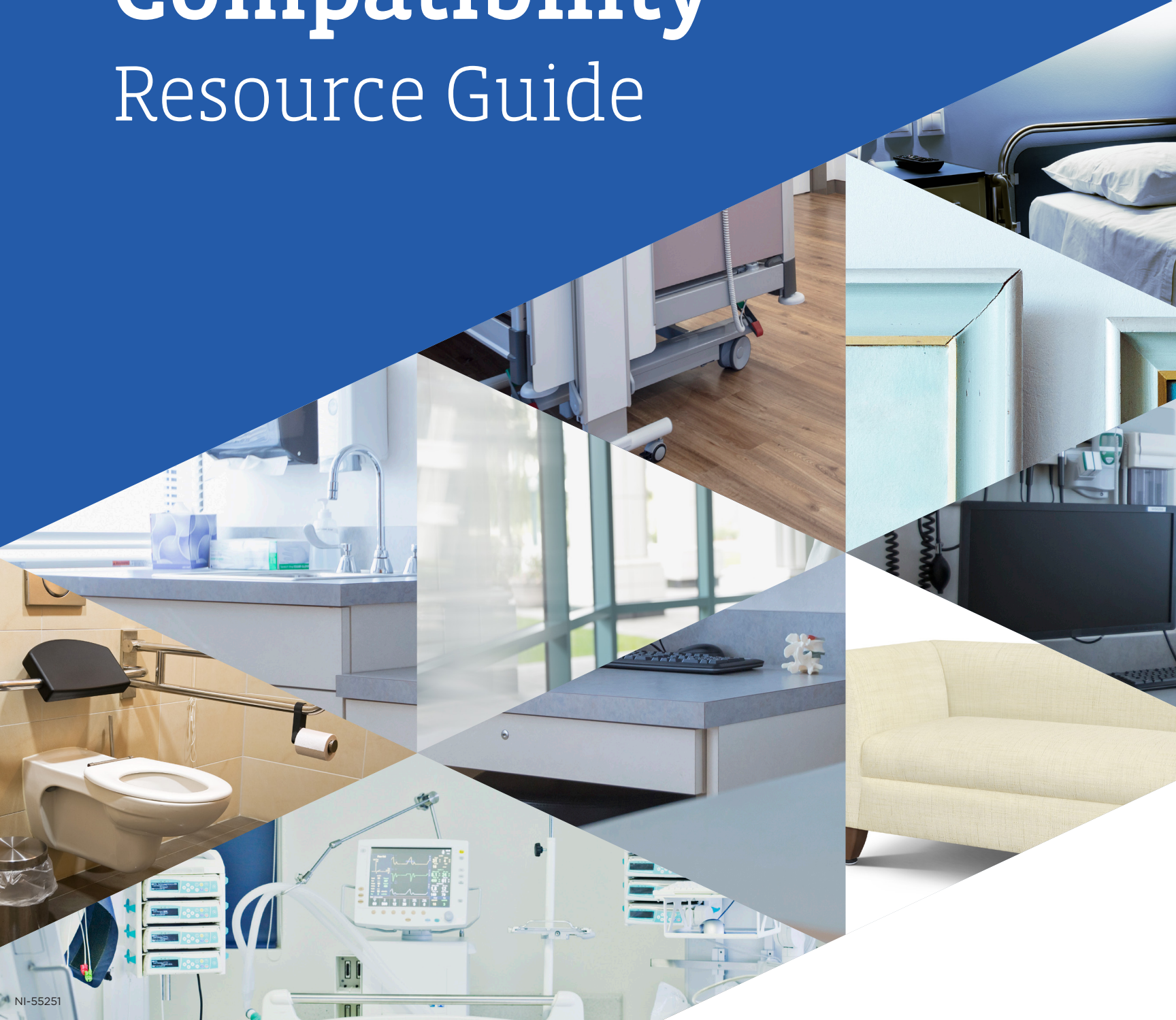




HEALTHCARE®

Surface Compatibility Resource Guide



16 months

is how long some
of the most dangerous
pathogens can survive
on a medical device.*



* Magill, SS. et al N. Engl. J. Med. 2014, 370 (13), 1198-1208.

THE CHALLENGE:

FDA and CDC guidance highlight the importance of medical device disinfection

*“FDA recommends that you validate your disinfection processes and instruction. FDA also recommends that you follow the recommendations in device-specific FDA guidance documents or any relevant FDA-recognized standards.”**

— FDA from
“Reprocessing Medical Devices in Health Care Settings: Validation Methods and Labeling. IX. Validation of the Final Microbicidal Process to Prepare the Device for the Next Patient”

“Medical equipment surfaces (e.g., blood pressure cuffs, stethoscopes, hemodialysis machines, and X-ray machines) can become contaminated with infectious agents and contribute to the spread of healthcare-associated infections. For this reason, noncritical medical equipment surfaces should be disinfected with an EPA-registered low- or intermediate-level disinfectant.”†

— CDC from
“Disinfection of Healthcare Equipment: Surface Disinfection”

* Reprocessing Medical Devices in Health Care Settings: Validation Methods and Labeling: Guidance for Industry and Food and Drug Administration Staff

† <https://www.cdc.gov/infectioncontrol/guidelines/disinfection/healthcare-equipment.html>

THE CHALLENGE:

Damage to dollars

Cleaning practices and products that are incompatible with medical materials can result in enormous hidden costs

“Use of cleaning agents or cleaning practices that are incompatible with the materials used in a medical device’s construction, or that are otherwise inappropriate for the device’s design, can cause the device to malfunction or to fail prematurely, possibly affecting patient care.”

— ECRI Institute

- ▶ Medical device manufacturers create numerous generations of the same device with varying material blends every year. These components/blends are never shared with the customer.
- ▶ Historically, disinfectant manufacturers prioritize efficacy and safety to patients.

Types of Surface Damage Seen in Healthcare

Multiple types of surface damage can result from the use of cleaners and disinfectants on healthcare surfaces



Plastic fatigue

cracks, crazing, often caused by plasticizing ingredients in formula (usually solvents)



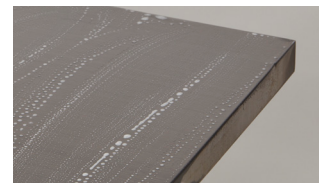
Discoloration

can occur when the protective coating is removed and then exposed to sunlight or heat




Metal corrosion

occurs when acidic and alkaline disinfectants damage metal surfaces, even those covered with protective paints and coatings



Residue

streaky residues caused by surfactants and solvents, or salty residues caused by dissolved solids are unsightly but usually removable by wiping with clean damp cloths

A photograph of a hospital room. On the left, a hospital bed with white linens and a pillow is visible. Above the bed, a long, thin light fixture is mounted on the wall. To the right, a bedside table holds a telephone and a remote control. On the wall behind the table are three light switches and a power outlet. The room is lit with a cool, blue-toned light.

33
billion

in annual healthcare cost is in preventable HAIs, of which 20% are associated with contamination related to medical devices.*

- *Office of Disease Prevention and Health Promotion*

*Office of Disease Prevention and Health Promotion. National Action Plan to Prevent Health Care-Associated Infections: Road Map to Elimination. Available at: www.health.gov/hcq/prevent-hai-action-plan. asp?ga=1.149183862.151257667.1479836176. Accessed Dec. 1, 2016.

THE CHALLENGE:

Complexity stems from numerous factors

Why is it so difficult to create a disinfectant that doesn't damage surfaces?

What factors can affect compatibility on devices?

- ▶ Disinfectant active ingredient
- ▶ Types and varieties of surfaces
- ▶ How device is being used
- ▶ Frequency of cleaning and the protocols
- ▶ Poor design for cleanability
- ▶ Other components of disinfectant (solvents, surfactants, additives)

A medical device can consist of up to **40** different materials and blends

25 different

surfaces can be found
within a healthcare facility.



acrylic

stainless steel

laminate

glass

paint

chrome

polypropylene

ABS

polyurethane/vinyl

linoleum/vinyl

PVC

OUR PROGRAM:

Clorox's approach to compatibility testing

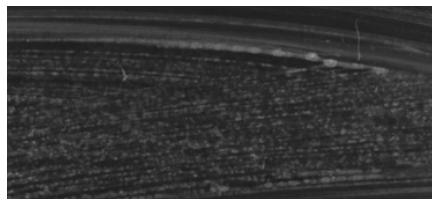
The Clorox Healthcare Compatible™ Program

In 2015, Clorox launched the Clorox Healthcare Compatible™ program to rigorously evaluate the compatibility of materials and equipment commonly used in healthcare with our range of disinfectants.

Our scientists continue to develop industry best practices to help our customers feel confident about the performance of our products.



Soak test. Material submerged in disinfectant chemistry for 4 days with a wet/dry cycle each day. Provides data on durability of material after intense exposure to chemical.



Wipe test. Surface wiped and allowed to dry 180 times. Simulates real-world exposure to wipes and residue build-up. Provides data on durability of material after intense exposure to chemical.



Stress test. Hole drilled near material edge, and vertical cut made to create high-stress area. Material immersed in disinfectant for up to 72 hours. Provides data on durability of material after intense exposure to chemical.

Our three-prong approach to compatibility testing determines how we rate the compatibility of disinfectants with commonly found materials in the healthcare setting.

Learn more at:
www.cloroxhealthcare.com/compatible

The Clorox Healthcare Compatible™ Star Rating System

3-Star System



No visible surface damage or effect on the material is likely to occur when used according to label directions. No change to the integrity of the material is expected.



Some visible surface damage such as tarnishing or clouding may be seen with long-term exposure. Little to no effect on material integrity is expected. Periodic wiping of surfaces with a clean damp cloth to remove residue can help to minimize damage.



Visible damage to the surface is likely to occur with long-term exposure and some effect on material integrity is possible. Surfaces should be wiped with a clean damp cloth immediately after the contact time has been reached to reduce the risk of damage. Users should evaluate the risk of surface damage vs. benefits of disinfectant efficacy against pathogens to determine whether the product is appropriate for use.

CLOROX HEALTHCARE: DISINFECTANT COMPATIBILITY CHART



**Clorox Healthcare®
Bleach
Germicidal
Wipes**



**Clorox Healthcare®
Fuzion® Cleaner
Disinfectant**



**Dispatch®
Hospital Cleaner
Disinfectant
Towels with
Bleach**



**Clorox Healthcare®
Spore Defense™
Cleaner
Disinfectant**



**Clorox Healthcare®
Hydrogen Peroxide
Cleaner
Disinfectant
Wipes**



**Clorox Healthcare®
VersaSure®
Cleaner
Disinfectant
Wipes**

	Surface	Potentially found in...	Clorox Healthcare® Bleach Germicidal Wipes	Clorox Healthcare® Fuzion® Cleaner Disinfectant	Dispatch® Hospital Cleaner Disinfectant Towels with Bleach	Clorox Healthcare® Spore Defense™ Cleaner Disinfectant	Clorox Healthcare® Hydrogen Peroxide Cleaner Disinfectant Wipes	Clorox Healthcare® VersaSure® Cleaner Disinfectant Wipes
POLYMERS	Acrylics (PMMA)	Phone displays, incubators, X-ray protective shields, isolettes	★ ★ ★	★ ★ ★	★ ★ ★	★ ★ ★	★ ★ ★	★ ★
	ABS	Keyboards, pumps, medical devices for blood access, enclosures for electrical and electronic assemblies	★ ★ ★	★ ★ ★	★ ★ ★	★ ★ ★	★ ★ ★	★ ★
	High-Density Polyethylene (HDPE)	Packaging, trays, bottles, and other industrial plastic products	★ ★ ★	★ ★ ★	★ ★ ★	★ ★ ★	★ ★ ★	★ ★ ★
	Marlite®	Wall panels	★ ★ ★	★ ★	★ ★	N/A	★	★ ★ ★
	Polypropylene (PP)	Hard molded plastic used for bottles, trays, device exteriors	★ ★ ★	★ ★ ★	★ ★ ★	★ ★ ★	★ ★ ★	★ ★ ★
	Polyvinylchloride (PVC)	Furniture, mattress covers, tubing, floors	★ ★ ★	★ ★ ★	★ ★ ★	★ ★ ★	★ ★ ★	★ ★ ★
POLYMERS	Tritan™ Copolyester	Clear polymer device components	★ ★ ★	★ ★ ★	★ ★ ★	N/A	★ ★ ★	★ ★ ★
	Healthcare-grade vinyl fabric	Furniture, exam tables, curtains	★ ★ ★	★ ★ ★	★ ★ ★	★ ★ ★	★ ★ ★	★ ★ ★
	Polycarbonate	Lenses, housings, IV connectors	★ ★ ★	N/A	N/A	★ ★ ★	★ ★ ★	★ ★
GLASS	Etched Glass	Wall panels, bathroom/shower enclosures	★ ★ ★	★ ★ ★	★ ★ ★	N/A	★ ★ ★	★ ★ ★
	Glass	X-ray shields, glass partitions	★ ★ ★	★ ★ ★	★ ★ ★	★ ★ ★	★ ★ ★	★ ★ ★
	Sapphire Glass	Device screens, protective covers	★ ★ ★	★ ★ ★	★ ★ ★	★ ★ ★	★ ★ ★	★ ★ ★
METALS	Aluminum (Multipurpose 6061)	Walkers, isolation carts, seating	★	★	★	★ ★ ★	★	★ ★ ★
	Chrome Plated Metal	Bathroom fixtures, IV poles, gurneys, equipment racks, stools, chairs, grab bars	★ ★ ★	★ ★ ★	★ ★ ★	★ ★ ★	★ ★ ★	★ ★ ★
	Stainless Steel 316	Sinks, wheelchairs, bed frames, cabinets, carts, trolleys, furniture, fixtures, equipment, counters	★ ★ ★	★ ★ ★	★ ★ ★	★ ★ ★	★ ★ ★	★ ★ ★
HARD, POROUS SURFACES	Corian®	Countertops	★ ★ ★	★ ★ ★	★ ★ ★	★ ★ ★	★ ★ ★	★ ★ ★
	Glazed Ceramic	Tiles	★ ★ ★	★ ★ ★	★ ★ ★	★ ★ ★	★ ★ ★	★
	Glazed Porcelain	Bathroom tiles, toilets, sinks	★ ★ ★	★ ★ ★	★ ★ ★	★ ★ ★	★ ★ ★	★ ★ ★
	Natural Marble	Decorative countertops	★ ★ ★	★ ★ ★	★ ★ ★	★ ★ ★	★	★ ★ ★
	Porcelain Enamel	Coatings on metal appliances, bathtubs	★ ★ ★	★ ★ ★	★ ★ ★	★ ★ ★	★ ★ ★	★ ★ ★
	Sealed Marble	Decorative countertops	★ ★ ★	★ ★ ★	★ ★ ★	N/A	★ ★ ★	★ ★ ★
	Sealed Granite	Decorative countertops	★ ★ ★	★ ★ ★	★ ★ ★	N/A	★ ★ ★	★ ★ ★

Marlite® is a registered trademark of Marlite, Inc.
 Tritan™ is a trademark of Eastman Chemical Company
 Corian® is a registered trademark of DuPont Building Innovations
 *Testing completed by manufacturer.

Who we are

Clorox Healthcare Values

- ▶ Clorox Healthcare prides itself on developing disinfecting solutions that help reduce HAIs in your facility and enable a safe environment for your patients.
- ▶ We also realize the important of keeping your facility looking clean and protecting the investment you make in your surfaces and equipment. We continue to invest in the development of products that deliver the efficacy you need with minimal aesthetic tradeoffs. In the absence of the ideal disinfectant, we believe it's important to educate our customers about surface compatibility and how to optimize your product, protocol and equipment choices to provide the best possible outcomes for you and your patients.
- ▶ That's why we developed this compatibility resource guide: to arm you with important information about how to address compatibility concerns and how our products can be expected to perform on different surfaces and equipment.



For product resources and implementation tools,
contact your Clorox sales representative or
Call: 1-800-234-7700
Visit: www.CloroxHealthcare.com

© 2021 Clorox Professional Products Company,
1221 Broadway, Oakland, CA 94612.

