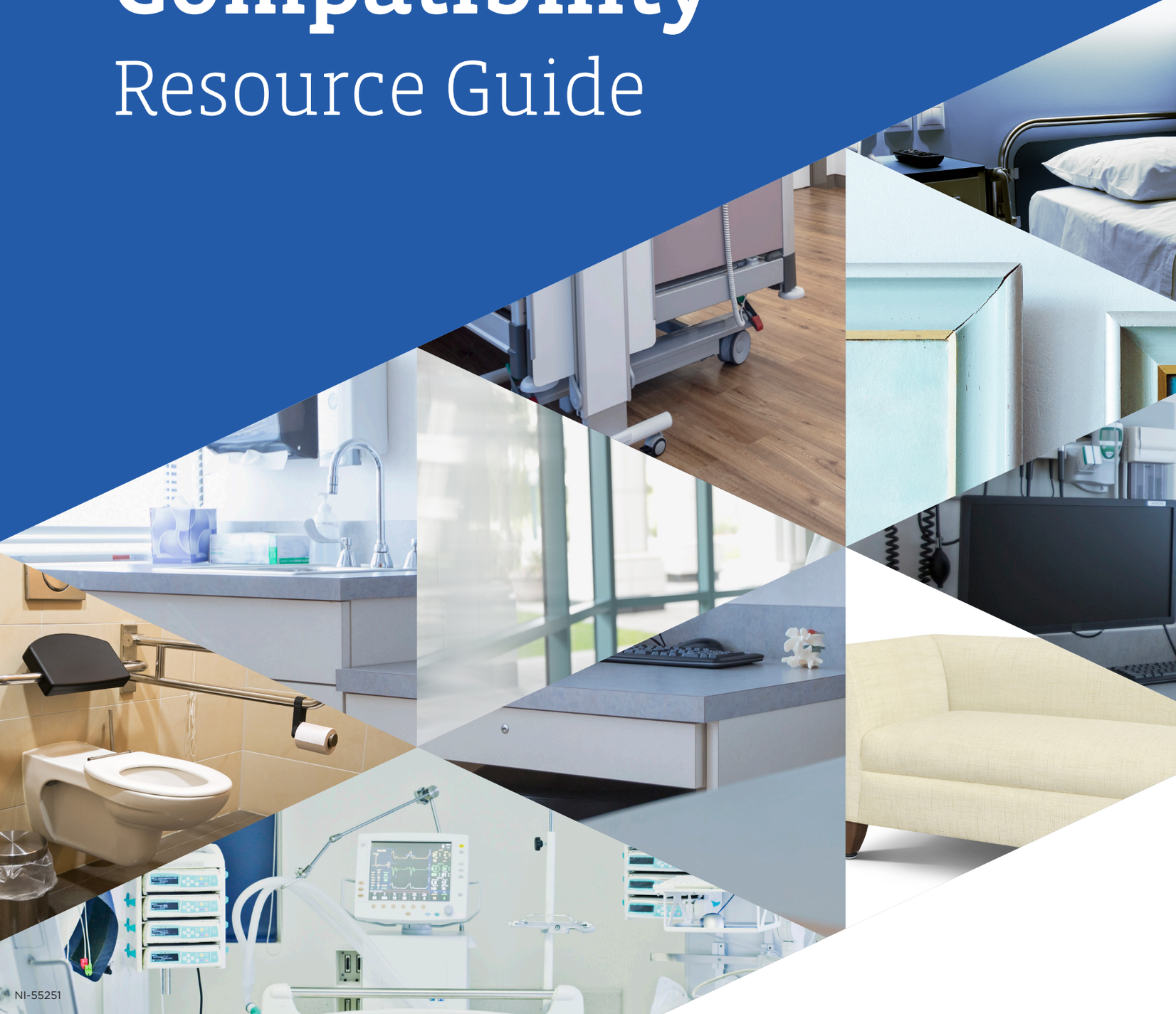
CLOROX HEALTHCARE®

# Surface Compatibility

## Resource Guide



NI-55251

# 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.

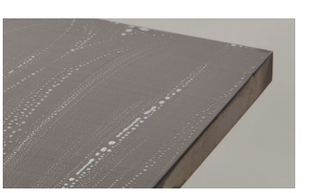
## Types of Surface Damage Seen in Healthcare

*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

**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:

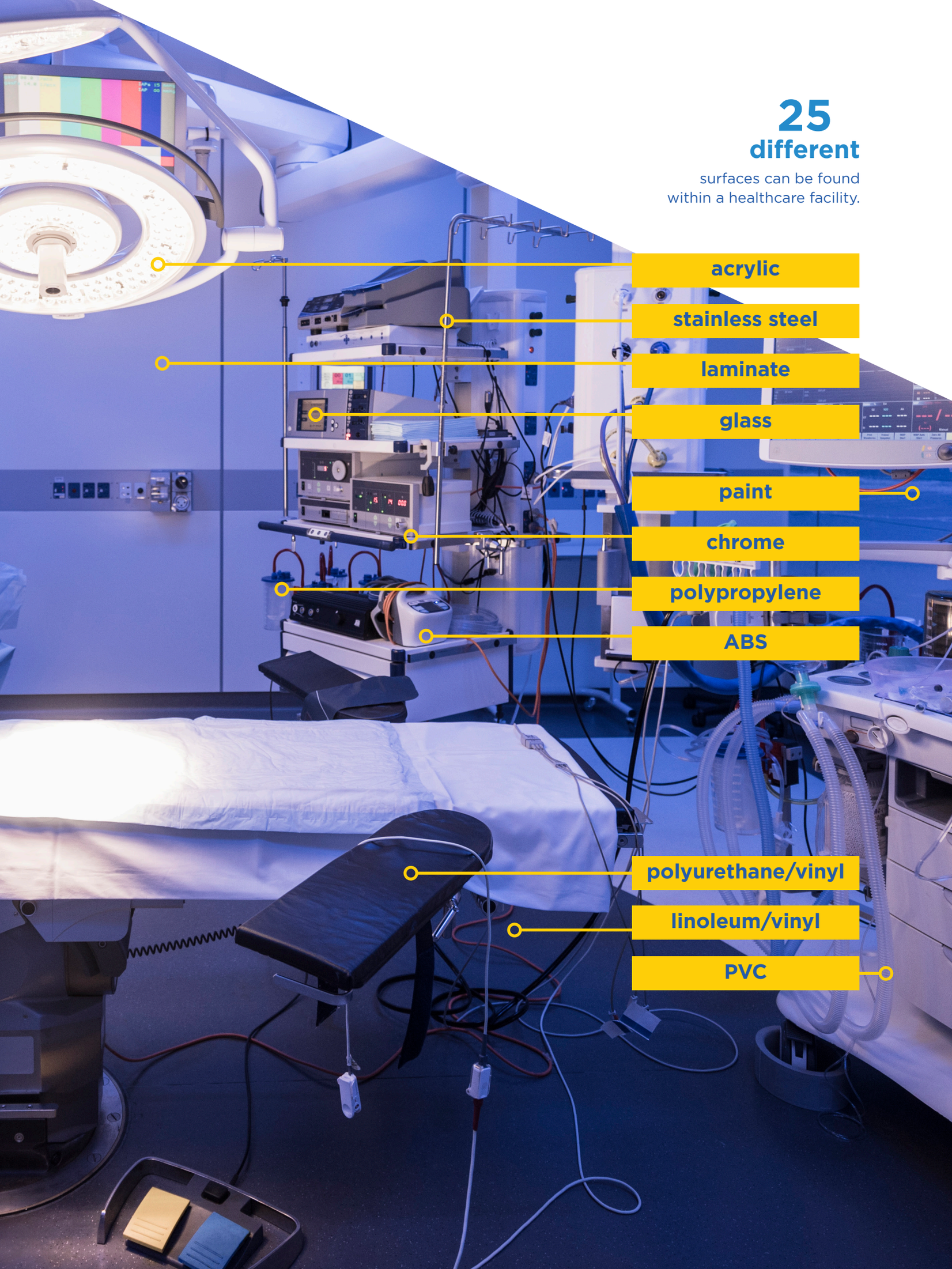
# Complexity stems from numerous factors

*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:

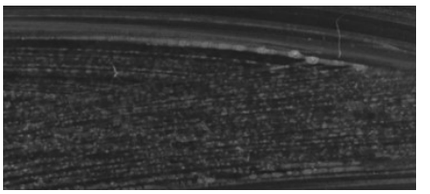
# Clorox's approach to compatibility testing

## *The Clorox Healthcare Compatible™ Program*

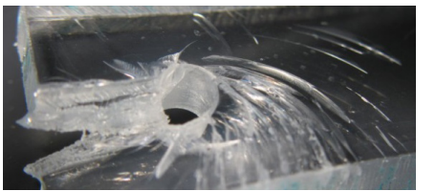
In 2015, Clorox launched the Clorox Healthcare Compatible™ program to rigorously evaluate the compatibility of materials and equipment commonly used in healthcare with our range of disinfectants.

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...* | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 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 | ★★★ | ★★★ |


*Testing completed by manufacturer.

*Updated: June 2021*

# 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.

CLOROX HEALTHCARE®

FROM CLOROXPRO®

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



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