

# SURFACE COMPATIBILITY OF BERKSHIRE VERSAHOCL® VS. TRADITIONAL DISINFECTANTS

## Key Findings from Cleanroom Metal Surface Testing

### \* Study Purpose & Background:

VersaHOCl® aims to balance antimicrobial efficacy with surface safety. Traditional disinfectants can damage cleanroom metals, increasing costs and contamination risk.

### \* Materials & Methods:

#### SURFACES TESTED

- Zinc Galvanized Steel
- 6061 Aluminum
- 304 Stainless Steel

#### DISINFECTANTS TESTED

- Berkshire VersaHOCl®
- Peracetic acid 0.08%/Hydrogen peroxide 1% RTU
- Sodium hypochlorite (Bleach) 0.525% RTU



## KEY INSIGHTS:



#### SUPERIOR SURFACE COMPATIBILITY:

VersaHOCl® exhibited minimal interaction with galvanized steel, stainless steel, and aluminum, causing only slight discoloration under extreme conditions and no significant effects with repeated use.



#### ADVERSE EFFECTS OF BLEACH:

Sodium hypochlorite (bleach) caused moderate discoloration and corrosion on galvanized steel, rusting and corrosion on stainless steel, and significant corrosion on aluminum under extreme conditions; it also caused rouging and discoloration with continued use.



#### SEVERE DAMAGE CAUSED BY PERACETIC ACID/HYDROGEN PEROXIDE:

This disinfectant led to significant rusting and corrosion of galvanized steel, severe pitting corrosion and warping of aluminum, while showing no reaction with stainless steel in both test scenarios.



#### TYPES OF SURFACE INTERACTIONS:

The study identified corrosion, rusting, rouging, and discoloration as key indicators of material degradation, each posing varying risks to structural integrity and contamination potential in cleanroom environments.



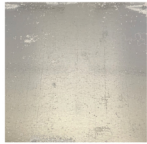
**Berkshire**  
ENGINEERED CLEAN

# OBSERVED INTERACTION

## 24 HOUR SOAK TEST



VersaHOCl®  
GALVANIZED STEEL



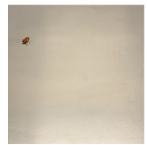
BLEACH 0.525%  
GALVANIZED STEEL



PERACETIC ACID/HYDROGEN PEROXIDE  
GALVANIZED STEEL



VersaHOCl®  
STAINLESS STEEL



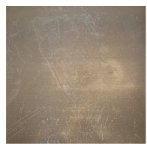
BLEACH 0.525%  
STAINLESS STEEL



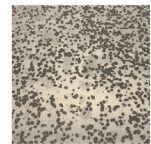
PERACETIC ACID/HYDROGEN PEROXIDE  
STAINLESS STEEL



VersaHOCl®  
ALUMINUM



BLEACH 0.525%  
ALUMINUM



PERACETIC ACID/HYDROGEN PEROXIDE  
ALUMINUM

- EXTREME USE:**  
VersaHOCl® showed minimal interaction; Bleach and Peracetic Acid/HP caused significant damage to some metals.

## TYPES OF DAMAGE OBSERVED:



Corrosion



Rusting



Rouging

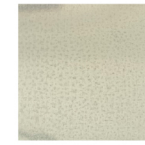


Discoloration

FOR MORE  
INFORMATION



## CONTINUED APPLICATION TEST



VersaHOCl®  
GALVANIZED STEEL



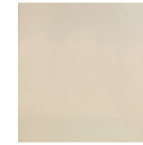
BLEACH 0.525%  
GALVANIZED STEEL



PERACETIC ACID/HYDROGEN PEROXIDE  
GALVANIZED STEEL



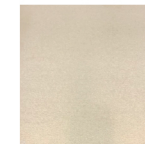
VersaHOCl®  
STAINLESS STEEL



BLEACH 0.525%  
STAINLESS STEEL



PERACETIC ACID/HYDROGEN PEROXIDE  
STAINLESS STEEL



VersaHOCl®  
ALUMINUM



BLEACH 0.525%  
ALUMINUM



PERACETIC ACID/HYDROGEN PEROXIDE  
ALUMINUM

150 spray/wipe cycles (simulated 6 months), 10-minute contact time reflecting industrial cleaning practices

- CONTINUED APPLICATION:**  
VersaHOCl® again showed minimal interaction; others caused rouging, corrosion, and warping.

## CONCLUSION:

The findings highlight that VersaHOCl® is the most effective disinfectant for protecting metal surfaces, causing minimal damage compared to other disinfectants, reinforcing its application in cleanroom environments.

