

DuPont Surfaces

DUPONT™ CORIAN® SOLID SURFACE

EFFECTS OF HEALTHCARE CHEMICAL DISINFECTANTS

TECHNICAL BULLETIN

DuPont™ Corian® solid surfaces have been used in numerous applications in the healthcare industry. Installations in a variety of environments include nurses' stations, patient rooms, operating and emergency room walls, scrub stations and patient bath/shower surrounds – just to mention a few. DuPont™ Corian® delivers design flexibility, ease of fabrication in combination with performance, durability and a renewable work surface for today's healthcare industry. This bulletin reviews the compatibility of DuPont™ Corian® solid surfaces with commonly used chemical disinfectant solutions.

In a healthcare setting, it is essential to be able to control the spread of infectious diseases. This is done partially through proper cleaning of surfaces within the healthcare environment. The choice of specific cleaning and disinfecting agents is largely a matter of judgment, facility procedures or governmental regulations. A single chemical disinfectant may not be suitable for all purposes or all environments within the healthcare facility.

The evaluation conducted by the DuPont Building Innovations Research and Development Center has examined the effects of disinfectant exposure on DuPont™ Corian® solid surfaces. A procedure similar to that described for testing of materials per ISO 19712-2:2007 and ANSI/ICPA SS-1-2001 was used to evaluate the effects that these disinfectants have on DuPont™ Corian® solid surface. Several drops of each disinfectant were placed on the surface and covered with a concave glass cover. After 16 hours, the glass cover was removed and the sample was removed from the surface with soap and water or as indicated. The following tables list the disinfectants used in the evaluation, the effect(s) the disinfectant had on the surface and the maintenance needed to renew the surface due to the exposure.

Sterilants/High Level Disinfectants

Disinfectant	Effect on Corian®	Maintenance Procedure
Ortho-Phthalaldehyde	No effect	None Required
Glutaraldehyde	Slight deglossing	Removed with wet Scotch-Brite® pad
Glutaraldehyde and Phenol	Slight deglossing	Removed with wet Scotch-Brite® pad
Hypochlorite (bleach)	Slight deglossing	Removed with wet Scotch-Brite® pad
Hydrogen Peroxide	Slight deglossing	Removed with wet Scotch-Brite® pad
Peracetic Acid	Slight deglossing	Removed with wet Scotch-Brite® pad
Hydrogen Peroxide and Peracetic Acid	Moderate deglossing and surface etching	Removed with wet Scotch-Brite® pad and bleaching and/or abrasive cleanser

Sterilants/High Level Disinfectants were used according to the manufacturer's use-dilution directions for high level disinfection. Prolonged exposure to concentrated, undiluted disinfectant solutions may degloss or etch solid surface material and require refinishing to restore the surface to its original condition. Clean spills promptly, additional information regarding DuPont™ Corian® solid surface care and maintenance may be obtained at www-surfaces.dupont.com



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Environmental Surface Disinfectants

Disinfectant	Effect on Corian®	Maintenance Procedure
Ortho-Phthalaldehyde	No effect	None Required
Glutaraldehyde	No effect	None Required
Glutaraldehyde & Phenol	No effect	None Required
Hydrogen Peroxide	No effect	None Required
Hydrogen Peroxide and Peracetic Acid	No effect	None Required
Peracetic Acid	No effect	None Required
Phenol	No effect	None Required
Hypochlorite (Bleach)	No effect	None Required
Accelerated Hydrogen Peroxide	No effect	None Required
Quaternary Ammonium Compounds	No effect	None Required
Alcohol (Ethyl, Isopropyl)	Moderate deglossing	Removed with wet Scotch-Brite® pad and bleaching and/or abrasive cleanser
Alcohol (Ethyl, Isopropyl) and Quaternary Ammonium Compounds	Moderate deglossing and Surface etching	Removed with wet Scotch-Brite® pad and bleaching and/or abrasive cleanser

Environmental Surface Disinfectants were used according to the manufacturer's use-dilution directions for general disinfection. Prolonged exposure to concentrated, undiluted disinfectant solutions may degloss or etch solid surface material and require refinishing to restore the surface to its original condition. Clean spills promptly, additional information regarding DuPont™ Corian® solid surface care and maintenance may be obtained at www.corian.com

References

Schulster LM, Chinn RYW, Arduino MJ, Carpenter J, Donlan R, Ashford D, Besser R, Fields B, McNeil MM, Whitney C, Wong S, Juraneck D, Cleveland J. Guidelines for environmental infection control in healthcare facilities. Recommendations from CDC and the Healthcare Infection Control Practices Advisory Committee (HICPAC). Chicago IL; American Society for Healthcare Engineering/American Hospital Association; 2004.