Disinfectant Residue

Residue: What is it and where does it come from?

After washing, cleaning, or disinfecting surfaces, residue can occur. The residue is what remains after the solution dries on the surfaces. It is a common occurrence and results from sources such as water, soaps/detergents, cleaning agents, disinfectants, and/or coatings. An example of a commonly found residue is hard water spots on windows. Residue can be seen on many surfaces, but in some cases the residue can be invisible.

The visual appearance of the residue may take different forms depending on the material, its ingredients, and/or its intended use. Typically, residue is more visible on dark or shiny surfaces. For example, some liquid coatings are designed to leave a film of protection on a surface. In that case, the residue may appear colorless.

Wine spilled on a glass table may leave a residue of purple spots. Some cleaning agents may leave a white film across a shiny surface and some disinfectants may leave a colorless, sticky residue on floors while others may leave white or discolored specks on metal or darker surfaces.

In some cases, residue on a surface may be harmless and is more of a visual distraction than a surface compatibility concern. In other cases, residues that build up over time, may lead to surface damage. In any case, when selecting a cleaning agent or disinfecting solution, it is important to understand the goals, as well as, the surface material so that the optimum solution can be selected without causing concern for surface compatibility.

Another important factor to consider is chemical compatibility. Incompatible chemistries can result in interactions which can generate stronger odors, or worse, health concerns. It is important to understand what chemistry was applied to a surface prior to introduction of a new chemistry. Steps such as pre-cleaning a surface or performing a potable water rinse can be beneficial to remove previous chemical residue, which can mitigate chemical interactions and/or promote a more pleasing aesthetic appearance.

Residue Prevention

Extreme residue can be a result of oversaturating a surface. Contact time is important to ensure disinfection is achieved, but surfaces left wet beyond the required contact time can result in slippery or sticky surfaces, wasted chemical, and surface residue.

Prior to Disinfection

To reduce surface residue it can be advantageous to experiment with the amount of disinfectant solution required to be applied to a surface to ensure it is wet for its contact time, which may result in less overall chemical applied to the surface. Typically charge bucket application and mopping can result in an overabundance of chemical used, which is why using wipes and disposables can help control the amount of chemical that is applied. Practices such as carefully measuring solution for disposable or laundered wipes or predetermining the necessary amount of disinfectant concentrates required can help reduce overall residue.

During Disinfection

To prevent residue from building up on a surface: after achieving the appropriate disinfectant contact time, remove any excess liquid from the surface with a clean cloth. The use of a potable water wipe rinse will also help prevent residue build up and surface compatibility issues. The use of another type of product to help prevent residue build up and enhance the surface image can also be used – for example, the use of a glass cleaner for mirrors after disinfection.

After Disinfection

To remove dried residue from a surface: some options include using a potable water wipe rinse with a clean cloth or using the disinfect solution itself followed by another wipe with a clean cloth. Be sure to wipe the surface right away without allowing the solution to dry on the surface. For more stubborn residue build up cases, the use of a hand pad (ex. Scotch-Brite™ Purple Scour Pad 2020) with water can help remove built up residue for some hard, non-porous surfaces.

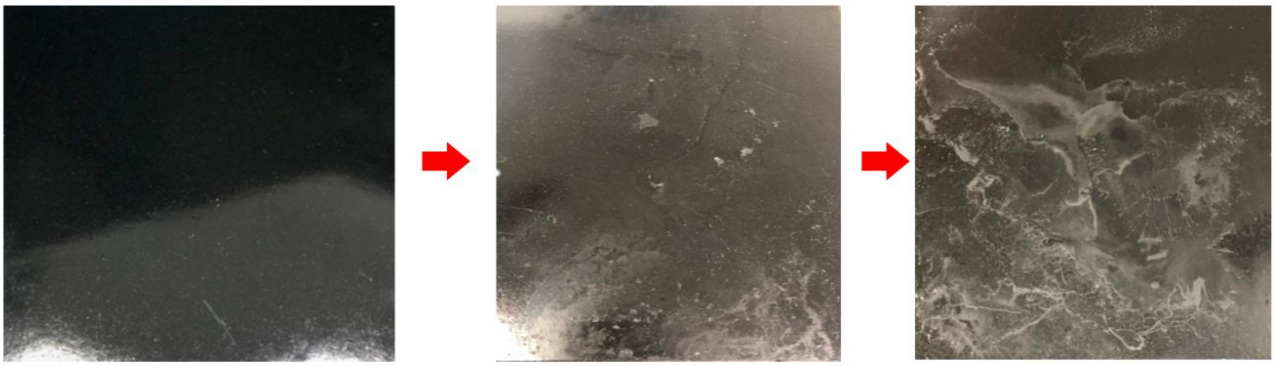
Frequency

Note: To prevent residue build up and potential surface compatibility concerns, perform a secondary wipe after each disinfection process.

Frequency can be dependent on the facility process and protocol. Adding a step in the cleaning/disinfecting process can result in significant cost for the facility, thus a high frequency of pre-cleaning or rinsing may not be feasible. Adding in a step when possible or being cognizant of surface residue can be helpful in maintaining facility cleanliness and overall appearance. Be sure to consult with material and/or equipment manufacturers for their cleaning and disinfecting guidelines, as well as the chemical manufacturer's recommendations for cleaning and disinfecting. Both resources may be able to assist with preventing residue.

Quat Residue-- Black VCT Tile

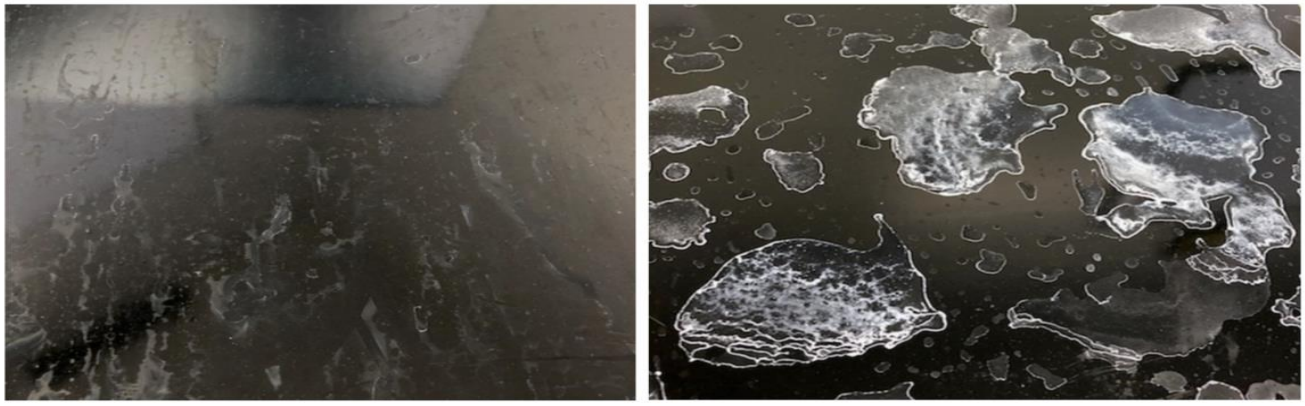
Clean Tile | Quat Soaked Tile (5 soaks)* | Quat Soaked Tile (10 soaks)*



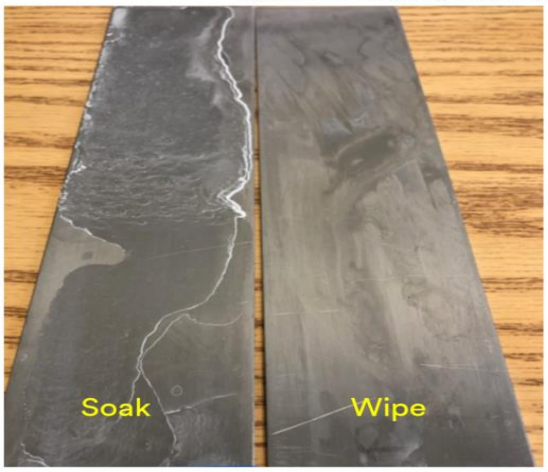
Quat residue not cleaned off in between soaks

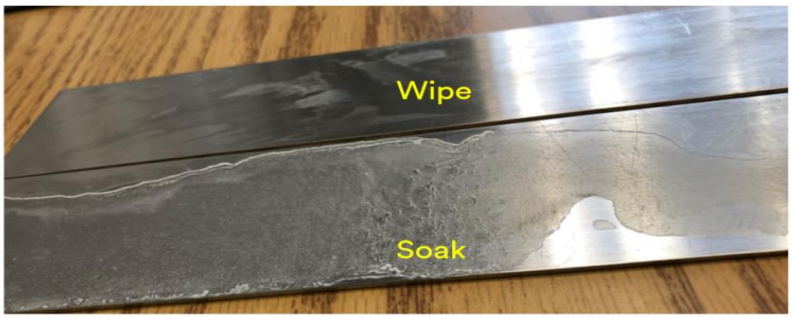
Sodium Dichloroisocyanurate (NaDCC) Residue -- Black VCT Tile

Wrung Out Wipe (4 minute contact time) | Soaking Surface and leaving to dry



NaDCC Residue On Stainless Steel--Wiping vs. Soaking





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