



OUR SCIENCE – UNDERSTANDING ADVANCED SURFACE CARE

No matter how much we clean, sanitize or disinfect surfaces, it is inescapable that dirt, grime and surface-contact germs keep coming back; sometimes in seconds.

Why? Because even the hardest of surfaces (glass, porcelain, ceramic, stainless steel, chrome and laminates) are like sponges; they have microscopic pores that trap water, organic and inorganic soils that attach in the microscopic pores, build up and form scale in layers...that become increasingly difficult to remove without scrapping and scrubbing the surface. Although water will not pass through glass, its surface is inherently hydrophilic (water-accepting). Others, like porcelain, ceramics, stainless steel and laminates, are naturally hydrophobic (water-rejecting), but become increasingly hydrophilic as they age, soil and weather.

Accordingly, the emphasis of our Advanced Surface Care is on the surface; not on the object or its use! In other words – glass is glass; whether in windows, balustrades, windscreens, shower doors or tables – and irrespective of the size or strength of the glass, and whether it is single strength, double strength, tempered, laminated, straight or curved, mirrored or colored.

Similarly, it is the surface of porcelain, ceramics, stainless steel, chrome and laminates – whether the objects are sinks, bathtubs, toilets, tile floors & walls, appliances & kitchen hoods, or counters & furniture facings – that attract and harvest everyday soil and microbes.

The development of cationic, anionic and nonionic surface active agents (surfactants) spawned a whole range of “detergent” cleaners. Surfactants are mostly organic compounds that are “amphophilic”; meaning that they contain both hydrophobic (water insoluble) and hydrophilic (water soluble) groups. Typically, surfactant molecules will migrate to the water surface, where their insoluble groups will mix with the oil phase of soil and the soluble groups remain in the water phase.

Until the advent of surfactants, cleaning was with the use of soaps or solvents. However, detergents now represent 75% of the cleaning products used for hard surfaces, dishes & cooking utensils, and for laundry in both residential and commercial applications because they readily reduce the surface tension of water to help to penetrate water-soluble soil and/or emulsify oil-soluble soil for improved removal.

Although surfactant-based detergents definitely improve the ease and quality of ordinary cleaning, they remain chemically unchanged in the washing process and invariably leave surfaces in a “wetable” (water filming) condition. Such wettable surfaces readily increase the adhesion and buildup of re-soiling from everyday spills & splatters, dirt, grime and dust. What’s more, wettable surfaces enhance the growth of organisms contained in everyday soil. Also, as water evaporates on such wettable surfaces – the inorganic (hard water) minerals that are solubilized (contained) in water – are left on the surface; where they readily bond and become increasingly insoluble in the form of “water spots”, “hard water mineral deposits”, and “scale.”



Detergent manufacturers have no problem with this negative attribute, because it leads to more soiling and more required cleaning...and the greater use of detergents. Another problem with many surfactants – even in the small quantities contained in detergents – is that they end up in waste water systems; where they play havoc with water reclamation.

The viable alternative for improved surface hygiene and easier cleaning – without the profuse use of detergents – is Unelko’s new dual-action cleaning & shielding technology that cleans everyday soil with newly-patented surfactant-free cleaning compositions. These new products clean...and simultaneously shield/protect surfaces with invisible water, soil & stain repellent barrier coatings that effectively reduce the adhesion & buildup of re-soiling (and the attachment of mineral deposits) for easier next-time cleaning...and prevent the growth of odor-causing bacteria, mold & mildew in-between cleaning.