Unelko Corporation
The Leader in Surface Care Technologies

OUR SCIENCE – "CLEAN SMARTER…NOT HARDER"

To "Clean Smarter…Not Harder" requires understanding the nature of everyday soil and the impact of rain, ground water and tap water on surfaces!

Everyday Surface Soil: When everyday spills and splatters are allowed to dry on interior or exterior surfaces, they result in soil that is either water soluble, oil soluble or water & oil **insoluble**. Water-soluble soil is easily cleaned with plain water, soapy water or mild detergent solutions. Oil soluble soil is readily softened and removed with suitable solvents or emulsifying degreasers. **It is the insoluble soil and buildup that present the greatest cleaning challenges!** Such soil and its buildup can only be removed by scraping and scrubbing with strong detergents, powerful acids or alkalis, penetrating solvents or abrasive cleansers.

The Nature of Surfaces: Although invisible to the naked eye, even the hardest of surfaces (from glass, porcelain and ceramics to marble, granite, stainless steel and laminates) are like sponges! They have microscopic pores that trap water, soil, pollutants and microbes that combine, adhere to the pores and buildup in layers, even biofilms.

The Impact of Water on Surfaces: **Insoluble soil** also results whenever rain water, ground water or tap water is allowed to evaporate on any interior or exterior surface. Municipally furnished water – while generally safe for drinking, cooking, washing and bathing – still contains enough salts, hard water minerals, bacteria, organic and inorganic contaminates and water treatment chemicals to be active chemically. **When such water evaporates on windows, sinks, tubs, toilets, shower enclosures, bathroom mirrors, tile walls, counters and other hard surfaces, it combines with ordinary soil to promote the formation, adhesion and build-up of insoluble buildup of soap scum, foodstuff, lime scale, mold, mildew, rust and hard water deposits.**

A Surface-Damaging Vicious Cycle: This ongoing exposure to chemically active water and everyday spills & splatters contributes directly to increased soiling - and to the surface damaging vicious cycle that results from scraping and scrubbing the otherwise insoluble soil with harsh cleansers to remove the buildup. The stronger the cleaning action, the more it opens the microscopic pores of the surface. The more open and vulnerable the pores, the deeper the new soil penetrates and the greater its adhesion and build-up - and the stronger the cleaning action required to remove the soil - with greater and greater destruction of the surface. Although microscopic at first, this cycle of scraping and scrubbing with powerful surface-active cleaners and cleansers ultimately leads to surfaces that are visibly rough, exhibit the loss of color and clarity, and become even more prone to soiling.

The Need for Water, Soil & Stain Repellent Surfaces: The world's leading manufacturers of glass, porcelain sinks, tubs & toilets, ceramic tile, plumbing hardware and other kitchen & bath surfacing materials have confirmed that the only way to reduce the adhesion and build-up of insoluble soil is to make surfaces more water and soil repellent - in effect, to **shield surfaces against the ravages of water and the formation of insoluble soil from everyday spills & splatters**. Although manufacturers have improved the density and "finish" of many surfaces over the years, **until rain, ground water and municipal water is completely de-mineralized** - no glass, porcelain, ceramic or other household surface can permanently withstand the erosive, abrasive impact of chemically active water, everyday soil and strong cleaners – and **no surface will ever be self-cleaning…let alone permanently self-cleaning.** Surfaces and their microscopic pores can, however, be protected with water, soil & stain repellent barrier coatings to reduce the adhesion & buildup of re-soiling for easier next-time cleaning!

The Importance of "Renewable" Surface Protection: Even DuPont's world-famous Teflon® coatings do not ***prevent*** soiling, they just make Teflon-coated cookware & utensils infinitely easier to clean. The

densely opaque, surface-altering Teflon coatings – although extremely durable – are nonetheless deteriorated by abrasion. Unfortunately, they are also **non-renewable. By important contrast**, Unelko's nano-scale barrier coatings are absolutely **invisible,** and do not change the appearance, texture or color of the surface to which they are applied. Although resistant to removal by any soap, solvent or detergent that would not damage and untreated version of the same surface, Unelko's coatings, like Teflon, are deteriorated and damaged by abrasion. But, unlike Teflon, Unelko's water, soil & stain repellent barrier coatings are designed and formulated to be **easily renewable** using ordinary "spray" or "spray & wipe" techniques.

"Preventive Cleaning" with Clean-X® Advanced Surface Care Technologies: Unelko Corporation has responded to the reality of today's cleaning challenges with an exclusive line of user friendly, surface-enhancing, environmentally safe products to **make surface care as easy as 1-2-3**. The patented and patent-pending high-performance CLEAN-X® Advanced Surface Care technologies**:**

(1) **CLEAN everyday surface soil & remove insoluble buildup without damaging the finish**
(2) **SHIELD surfaces with invisible water, soil & stain repellent barrier coatings against the adhesion and buildup of re-soiling for easier next-time cleaning**
(3) **PROTECT surfaces against the growth of odor-causing bacteria, mold and mildew in-between regular cleaning.**

The appropriate use of these unique, multi-functional, multi-surface products will easily cut cleaning time in half and keep everyday surfaces sparkling, like new!