

ON CLEANING & SANITIZING “GREEN”

There are no official governmental regulations or voluntary industry standards that define or limit the claims made or terms used to describe the health, safety, use, performance or environmental impact of the **hundreds of millions of surface care products sold annually!** As a consequence, the array of jargons and euphemisms indiscriminately employed by many manufacturers of cleaning and sanitation products has reached epidemic proportions...leading to product use, performance and environmental claims that are all too often misleading, and, in some cases, outright false!

Most end-users **cannot** – and the retailers and institutional wholesalers on whom they rely **do not** – properly assess whether the cleaning, sanitizing and disinfecting products being offered are, in fact, **safe to use, effective on every day surfaces and are “green”**. Environmentally preferable “green” products are those that are readily biodegradable, have low toxicity, and contain no phenolic compounds or volatile solvents. Their composition and packaging should not constitute hazards in use or hazardous waste.

A prime example of exaggerated, misleading labeling is a leading “professional” *Disinfectant Spray* that, on its front label, boldly claims, **“Kills 99.9% of Germs in 30 seconds**”**. The two asterisks refer to fine print on the back label that states, **“**Sanitizes: Kills 99.9% of Staphylococcus aureus (Staph), Klebsiella pneumoniae (K.pneumoniae) and Trichophyton mentagrophytes on hard, non-porous surfaces in 30 seconds”**. *This presumes that end-users know the difference between “sanitizers” and “disinfectants”, and know that these particular bacteria are merely representative of the thousands of other bacteria, virus, mold & mildew that constitute the totality of the “germs” in our environment; most of which require “immersion” in the formulation for 30 minutes or longer to achieve the 99.9% “kill” results.* Even then, to “disinfect” as the product is titled and marketed, the fine print back label directions state, **“For precleaned surfaces: Spray 2 to 3 seconds until covered with mist. Allow to stand 10 minutes to air dry. For hard, non-porous food contact surfaces: Spray until covered with mist, let stand for 10 minutes, then rinse thoroughly.”** *While the front label of this spray product proclaims that it also “Eliminates Odors”, it fails to inform users that it really takes 10 minutes or longer, that the product is FLAMMABLE (it contains a high percentage of volatile organic compounds), that the contents are under pressure or that surfaces must be “pre-cleaned” before being “disinfected.”*

Another example of misleading labeling is a leading *Soft Cleanser with Bleach* that claims the product to be **“Anti-Bacterial”**; based on its 1.1% sodium hypochlorite active ingredient. The product also claims to “kill 99.9% of household germs in 3 minutes at full strength”, *but it does not disclose the fact that sodium hypochlorite is more commonly known as “chlorine bleach” and that this particular type of bleach liberates chlorine gas when exposed to air. Its main label also does not disclose that “heavily soiled surfaces must be pre-cleaned before disinfecting”; this for a product that contains mostly calcium carbonate abrasive particles and surfactants.* In fact, what “household germ” is not killed or removed when scrubbed with a “bleach-free” abrasive cleanser and wiped or flushed from the surface...what does the addition of chlorine bleach contribute other than to enable its maker to make misleading “kill” statements?

Broad terms like “antibacterial”, “antiviral”, “antifungal”, “germicidal”, “anti-microbial” and “bactericidal” when used to “tout” the performance/use of sanitizers & disinfectants are **only meaningful if their labels clearly describe and support how the specific organisms listed are detected and/or identified without microscopic analysis... and how the product itself – not the “pre-cleaning” – is used to eliminate or control the presence of bacteria, virus, mold & mildew .**

THE IMPORTANCE OF USER SAFETY...FULL DISCLOSURE

Any composition/combination of natural or synthetic chemicals used to loosen and remove soil from a surface and/or reduce the presence of germs that cause infectious diseases, should be thoroughly tested and properly labeled to ensure safe storage, handling and use of the product. Product labels should signify that such storage, handling and use information provided is in total conformance with all applicable Federal Hazardous Substances Act, the Office of Prevention, Pesticides and Toxic Substances (OPPTS), U.S. Environmental Protection Agency (EPA) and Consumer Product Safety Commission 16 CFR 1500 regulations. The use of fine print and the co-mingling of technical terms should be avoided to enable the effective use of the product in the manner directed for purposes that are clearly represented.

Thus, all aerosol, trigger-spray and dilutable compositions – whether of natural and/or synthetic chemical composition – should be tested and labeled in accordance with the OPPTS standards for acute eye irritation, skin irritation, oral toxicity, dermal toxicity, skin sensitization and inhalation (the “6-Pak” tests). Material Safety Data Sheets (MSDS) should not be constructed with so much technical language as to be incomprehensible to the actual users of the underlying products.

THE IMPORTANCE OF ENVIRONMENTAL IMPACT...FULL DISCLOSURE

Simply stated, terms like “environmentally friendly”, “environmentally safe”, “green”, “natural”, “non-polluting”, “ozone friendly”, “unscented” or “eco-safe” have no scientific basis, and those manufacturers who use such claims are not free from abject self-interest in the confusion that they generate with their use of such unsupported terms.

Any manufacturer with a genuine concern for air, ground and water quality (the “environment” over which we do have some control) will formulate cleaning and sanitation products that are free of those chemicals that have a proven negative impact on the environment. They should formulate products that are free of strong acids & alkalis, phosphates, ammonia, glycol ethers, terpenes, hydrocarbon propellants, phenolic compounds, solvents/VOCs, CFCs, chlorine bleach and the array of surfactants that are being seriously overused and make water reclamation increasingly difficult...and they should label products to advise end-users of those benefits.

THE IMPORTANCE OF FULL DISCLOSURE REGARDING FORMULATION, PACKAGING & LABOR

Just as it is unrealistic to expect that surfaces will ever be “self-cleaning” or “self-sanitizing”, it is equally unrealistic to expect cleaners, cleansers, sanitizers or disinfectants to perform without some form of mechanical action that includes a degree of wiping, massaging and scrubbing with cloth, sponge or brush. Even rinsing and flushing the surface with water is a mechanical action. Thus, any “cleaner” that purports to clean without some form of mechanical action is normally so acidic or so alkaline that it will invariably etch or damage the underlying surface unless immediately and thoroughly flushed from the surface. Similarly, any “sanitizer” or “disinfectant” that purports to “kill” germs in seconds by merely “misting” the surface – unless thoroughly flushed from the surface – will leave residues that actually promote re-soiling, buildup and re-contamination.

The everyday spills & splatters of organic soil (that includes municipally-furnished water, foodstuff, soap scum, grease, oil, fingerprints and microorganisms) – if not cleaned – leads to the adhesion and buildup of such organic soil, the formation of inorganic soil (that includes hard water minerals, lime scale, rust, stains and oxidation) and the unrestrained growth of bacteria, virus, mold & mildew.

Properly-formulated cleaning and sanitation chemicals should be ready-to-use (RTU) and their performance claims and directions should be clear and unequivocal. In the case of sanitizers and disinfectants, if pre-cleaning is required (as it is with most such products, including those that are “EPA-

registered”), then that fact should be prominently disclosed on the label(s) and should not be hidden in fine print or otherwise disguised in vaguely-worded directions that are seriously misleading to end-users. Instructions should also be provided as to what cleaning techniques are to be used, what cleaning chemicals to avoid if incompatible with the chemistry of the sanitizer or disinfectant, and whether the surface should be flushed, dried and/or polished before use of the sanitizer or disinfectant to avoid dilution and diminished effectiveness.

Not only has “packaging” become a significant component of municipal solid waste landfills, the manufacture of those chemicals, plastics, paper and corrugated that go into the various forms of

packaging are posing increasing drains on natural resources and increasingly contribute to the various forms of air, ground and water pollution.

The Organization for Economic Cooperation and Development defines “ready biodegradability” as those organic components (above 1 percent in a ready-to-use product) that are 60 percent to 70 percent biodegradable in 28 days. Other than the negative impact of VOC solvents on air quality and the impact of certain surfactants on water reclamation, there are few chemicals in ready-to-use cleaners, sanitizers and disinfectants that do not biodegrade readily or, in the case of “grits” and particulates in cleansers, do not revert to the natural minerals from which they originate. Thus, “biodegradability” applies infinitely more to product packaging than it does to the contents/formulation of the products contained.

READ THE LABELS!

When considering cleaners, cleansers and germicides, separately or in combination, whether in RTU or concentrate form, it is absolutely essential for end-users and their suppliers to read the labels and answer the following questions before purchasing or recommending the products:

1. If used as directed, will the product reasonably keep the promises made and provide the benefits claimed by the manufacturer?
2. Are the instructions clear enough for the product to be used as directed under real-world, every day conditions in homes, public buildings and facilities?
3. Can the warnings or precautions regarding user handling and storage of the product be observed in a practical manner?
4. In the case of germicides, is pre-cleaning and/or post-application wiping or rinsing of the surface required, and, if so, how long will the entire process take?
5. How does the user determine whether the germicidal treatment was successful?
6. Will the product provide anything more than 1-time “clean” or 1-time “kill” results?
7. Does the product provide any form of ongoing protection against buildup from re-soiling or germ growth from re-contamination?
8. Does the manufacturer’s website provide Material Safety Data Sheets and other information required for the safe and intelligent use of their products?

If the answers to any of these questions are “No” or “Unknown”, the underlying product should not be purchased unless the user is willing to assume the full risk of product and performance failure.

MISLEADING LABELING UNDERMINES END-USER CONFIDENCE

Another vibrant example of blatantly misleading labeling is a new “Earth Choice” spray product; a description that the EPA advised is unacceptable because it is false and misleading. The product claims to be a “commercial janitorial disinfectant” with the trade name “**Silver Formula 24 GERM CONTROL.**” Behind the numeral “24” is the outline of a clock; suggesting that the germ control activity is effective for 24 hours. Directly under the trade name are the claims, **Disinfectant, Fungicide & Virucide*** and the statements: **Kills MRSA & VRE – Disinfects without Bleaching.** The ACTIVE ingredients are shown as **0.003% Electrically-generated Silver Ions, 4.840% Citric Acid.**

Under **DIRECTIONS FOR USE** on the back label is the statement, “It is a violation of Federal Law to use this product in a manner inconsistent with its labeling.” There are, however, no such directions for use included on the back label. Instead that label contains three paragraphs attesting to its formulation as a

“colorless, odorless broad spectrum antimicrobial disinfectant and deodorizer that is proven to kill bacteria, fungus and viruses on non-porous environmental hard surfaces in homes, hospitals, nursing homes, medical and dental clinics, laboratories, ambulances and patient transfer vehicles, funeral homes, hotels, restaurants, schools, day care facilities, offices veterinary clinics, animal shelters, kennels, locker rooms, kitchens and restrooms.” Two other paragraphs list the array of “non-porous environmental surfaces” to be disinfected. Under **Storage**, the label states: “Do not contaminate water, food or feed by storage or disposal.” **Disposal** states: “Do not reuse container. Rinse thoroughly before discarding in trash or recycling.” (*If the product contaminates water, how is to be rinsed?*)

If these front and back labels are not misleading and confusing enough, there is more...much more...on two additional inside labels accessed only by “peeling” off the back label. These additional labels are loaded with section after section regarding many topics: **Germ Control, Fungicidal Activity, Viral Control, Fungus Control, Instructions for Cleaning and Decontamination Against HIV, Personal Protection, Contact Times, Disposal of Infectious Materials and an extensive table that lists Organisms and corresponding Kill Times that range from 30 seconds to 10 minutes.** The only **APPLICATION INSTRUCTIONS** regarding all uses of this product state: **“Pre-clean surfaces prior to using this product.”** Incredibly, no information is provided as to how or with what to clean the surfaces, or whether the surfaces must be dried before using “Germ Control.” *Although the composition may well meet the “kill claims” when used on the specified organisms under isolated laboratory conditions, it is unlikely that the “Germ Control” product will provide the results claimed or those anticipated by the end-user under “real world” conditions; even if used as “directed”!*

Most end-users, even those fluent in English, cannot comprehend the meaning and nuances of such labeling; even if this was the only product they used and they took the time to research and experiment with its use. How can other end-users possibly succeed with it?

LET’S FACE IT...

No matter how much we clean, sanitize or disinfect surfaces...dirt, grime and surface contact germs keep coming back!

What’s more, even hard surfaces have microscopic pores that trap everyday soil, hard water minerals, soap scum and organisms...and allow them to combine, attach and buildup on the surface.

Pathogenic organisms are invisible to the naked eye, and are typically deposited with the spills & splatters of organic soil (including foodstuff, soap scum, chemically-active water, grease, oil and fingerprints) on which they depend for the moisture and nutrients required by them to thrive. Unless swab-tested and microscopically analyzed, organisms cannot be identified, and, without identification, there is no practical way to determine which sanitizer or disinfectant to use, how long the surfaces must be misted or flooded with the germicidal composition for it to be effective...at least until the next fingerprint contaminated with Norovirus, contact with e-coli loaded lettuce or salmonella-tainted chicken. And even so, unless the treatment material is thoroughly flushed from the surface, it can leave residues that provide the moisture and nutrients on which the next organism will colonize.

By this time, the reader is probably thinking, **“Okay, so many of the cleaning and most of the sanitizing & disinfecting products out there (1) won’t do what they say, (2) are difficult and time-consuming to use properly, (3) may even be dangerous to use and store, and (4) are probably not good – and may even be harmful – to the environment. So what’s the solution?”**

HIGH-PERFORMANCE “GREEN”ALTERNATIVES

Invisible water, soil & stain repellent barrier coatings are proven to restrict the adhesion and buildup of organic and inorganic soil that include microorganisms. When deposited on hydrophobic surfaces, soil is distinctly visible and is more easily cleaned/removed; often with only plain water, mild “green” cleaners or cleansers...**or the advanced Unelko tri-functional surface care technologies that CLEAN everyday soil, SHIELD surfaces against buildup & PROTECT against microbial growth in 1-Step!** These multi-functional, multi-surface products take the “guesswork” out of cleaning, sanitizing and disinfecting everyday surfaces. And because they are ready and easy to use as formulated, automatically rejuvenate

the protective barrier every time they are used to clean, leave no residues and are free of toxic chemicals, they provide the ultimate in “green” surface care without the need for false and misleading claims and labeling!

Please visit www.unelko.com for more information about surface care, detailed product descriptions, MSDS & value pricing! Put **CLEAN & SHIELD®**, **SANI-SHIELD®** and **SANI-SCRUB®** to the test!

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