

## **Principles of Cleaning Textile Floor Coverings**

*by the ANSIIICRC S100-2015 Consensus Body*

### Synopsis

The objective of professional textile floor covering cleaning is to maximize soil removal while minimizing damage. Before cleaning methods are selected, an evaluation of the textile floor covering should be performed.

For any method or system to be effective, essential principles of cleaning should be addressed to obtain the desired cleaning result. If these principles are compromised, cleaning effectiveness will be diminished.

*Principle 1: Dry Soil Removal.* Vacuuming techniques and frequencies should be selected based on an understanding of how and where soils accumulate in carpet. A vacuum incorporating high-velocity airflow and pile agitation is recommended. A pile-lifting device can be used in soil-impacted areas. Vacuums with high-efficiency soil-collection systems should be used. This reduces distribution of fine particles into respirable air.

*Principle 2: Soil Suspension.* Soil suspension separates adhered soils from fibers not removed during dry soil removal procedures. Maximum soil suspension incorporates four elements: chemical activity, heat or temperature to accelerate chemical activity, agitation for proper chemical distribution, and time for chemicals to function properly. When one or more of these four fundamentals is decreased, one or more of the others should be increased in order for maximum soil suspension to occur.

*Principle 3: Suspended Soil Removal.* Once soils have been suspended as completely as practical, they should be physically removed. Mechanisms for removing suspended soils and the methods to which they apply include absorption or adsorption, wet vacuuming, rinsing/water extraction, flushing, and dry residue vacuuming.

*Principle 4: Pile Setting or Grooming.* While post-cleaning pile setting or grooming does not contribute to soil removal, it should be performed in selected situations to reduce matting, crushing or texture changes; provide proper distribution of post-cleaning treatments; enhance evaporation; and enhance appearance. It is not required on commercial carpet with a low, level-loop pile design.

*Principle 5: Drying.* Cleaners should take steps to minimize drying time following cleaning. Failure to dry textile floor coverings within a reasonable timeframe can result in several potential problems, including customer inconvenience, resoiling due to soil transfer from foot traffic, slip and fall potential, microbial growth and associated odor, cellulosic browning, and dye migration.

Drying times are highly dependent on the technician's performance, equipment's

performance, customer's cooperation, level of soiling, and the method of cleaning employed.

**Soil Management: The most important step in textile care**

Soil management begins outside a home or building, where the majority of abrasive and oily soils originate. Parking areas and walkways should be vacuumed, swept or blown off frequently, and kept free of debris. Additionally, they should be pressure washed or wet brushed and hose rinsed to prevent the accumulation of abrasive and oily soils and dust.

*Soil Barriers.* Soil should be prevented from entering a building by a properly specified barrier system, which may incorporate both exterior and interior mats. A single mat may suffice at the entry of most residences, commercial building entrances should have a two-mat system for maximum soil-entry prevention.

*Vacuuming.* The objective of vacuuming should be to remove as much of the particulate and bio-pollutant as possible without damaging face yarns or redistributing particulate back into the air.

*Commercial and Residential Maintenance Programs and Procedures.*

Commercial facilities should have a plan for programmed soil removal and management. The maintenance aspect of soil management should consider many factors, including budget, occupants, types of floor covering, sources and types of soil, concentrations of soil, and the appearance level desired by management.

Residential carpet installations should have a plan that includes sweeping or blowing off sidewalks, driveways, and entry areas, cleaning entry mats, regular vacuuming, routine spotting, and professional cleaning.