



White Paper:

RUBBER FLOORS SUPPORT A SAFE, HEALTHY ENVIRONMENT

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Safety is top-of-mind among healthcare professionals—the safety of their patients, their staff and visitors to their facilities. It follows, then, that safety should be just as important to those who design and construct healthcare facilities, including hospitals, medical office buildings, free-standing urgent care facilities, surgical centers, clinics and assisted living facilities. The materials they choose and install can impact safety in a variety of ways. This is especially true of interior finishes—things like furniture, fabrics, wall coverings, window treatments and floor coverings.



Among floor coverings, rubber flooring can significantly contribute to a safe environment for a variety of reasons, beginning with its composition. Rubber flooring is a sustainable material made from renewable natural rubber that is extracted from the sap of the tropical rubber tree, as well as synthetic rubber. Depending on the manufacturer, the product may also contain natural fillers to supplement the high-quality natural and industrial rubber qualities, as well as environmentally compatible color pigments that are free of lead and other heavy metals.

Rubber flooring promotes good indoor air quality

Just as important, many rubber floors are free of polyvinyl chloride (PVC) plastic and the risks associated with the leaching of chemicals used in the manufacturing of PVC products. Because rubber flooring does not contain PVC, it does not generate any hydrochloric acid, dioxins or furans, contributing to healthy indoor air quality for patients and staff. Nor do rubber floors contain plasticizers (phthalate) or halogens (e.g., chlorine), and some are GREENGUARD Gold Certified for low VOC emissions. This high-level certification offers stringent criteria to meet the strict emissions levels as presented by UL Environment, which focuses on healthy indoor environments.

The floor's dense, nonporous surface helps repel bacteria, making the floor naturally resistant to bacteria, fungi and micro-organisms. This important feature promotes health and safety in healthcare facilities by helping to prevent infection.

Dense composition repels dirt

The floor's dense, nonporous surface also helps repel dirt, making the floor easier to keep clean. The floor stays clean longer and can be maintained with regular dust mopping. When a deeper cleaning is required, a mop and tap water will often suffice, eliminating the need for harsh cleaning products. Additionally, rubber flooring does not require waxing, stripping or the application of sealants. The absence of wax and other chemicals benefits everyone in a healthcare setting, especially those who might be sensitive to smells or suffer from allergies that these products aggravate. It also means patients will not need to be moved and large areas of a facility closed for an extended period of time while floors are cleaned and waxes are applied and allowed to dry. This is especially important in busy healing facilities that operate around the clock.

A dense surface also allows the floor to stand up to water, chemicals and other liquid spills without absorbing them. This includes food spills in cafeterias and break rooms, as well as disinfectants, betadine, blood and urine more common in treatment areas and patient rooms. These spills can be cleaned up quickly and effectively, leaving no residual staining and easing the cleaning process.

Slip resistance protects against falls

As these spills are removed, the likelihood of slips and falls is sharply reduced, aided by the slip-resistant properties of rubber. In many cases, the floor exceeds OSHA recommendations for slip resistance, providing the extra traction that makes for a reliable and safe surface.



Should a fall occur, the resilience of rubber flooring cushions the fall and reduces the likelihood of serious injury. This feature is most appealing for patients using canes and walkers as well as orthopedic patients working to regain their balance and ability to walk. Those in wheelchairs (and the nurses who push them) will also find it easier to maneuver chairs across rubber flooring. In fact, the floor's low resistance to wheeled equipment reduces the possibility of over-exertion on the part of staff who regularly move carts, equipment, chairs, supply carts and patient beds—anything on wheels that needs to be moved.



Comfort underfoot improves performance

The resiliency of rubber is also important to medical personnel and members of the housekeeping staff, who spend the majority of their work day on their feet. Hard, unforgiving flooring surfaces can cause fatigue and negatively impact performance, while softer, more cushioned rubber flooring offers an important weapon in the battle against muscle fatigue and aching backs, legs and feet. Its content and structure make rubber especially resilient, easing the stress of walking and standing as it ensures comfort underfoot and allows nurses to concentrate on their patients rather than the pain in their feet.

Patients and staff will also appreciate the acoustic properties of rubber flooring, which contribute to a safe, healing environment. The resilient material in rubber flooring can attenuate a significant percentage of unwanted noise. As a result, noise generated by footsteps, conversations, technology and doors closing is reduced and far less distracting. For patients, improved acoustics encourage the rest and sleep important for recovery. For nurses and other workers, it means the ability to better concentrate, retain information and respond to patients' needs.

Flooring protects equipment

In areas where sensitive electronic equipment is in use, the static dissipative properties of some rubber floor coverings is also important. If electrostatic charges are not dissipated in a controlled way, they can cause failures and indication errors in measuring devices. Static dissipative floorings can help protect electrical equipment while offering the advantage of minimum charging propensity. If additional protection against electrostatic discharge is required, insulating rubber floor coverings are available, offering a resistance of more than 109 ohm.

Designers will be pleased with the variety of colors, patterns and textures rubber flooring offers. Together, they help to support a cohesive look throughout a facility and a design that provides a soothing, healing environment for patients. But they can also be used to create an important wayfinding tool to safely guide patients and visitors through an unfamiliar facility as they seek treatment and visit loved ones. At the same time, the flooring lends itself to the use of inlays that can support a design theme with colorful logos, images and patterns or provide a way to measure progress for patients who are working on walking skills.

Safety and protection for all

The variety of activities that take place in a healthcare environment can challenge designers and contractors as they search for a floor covering with properties that address each of these activities and still support the creation of a safe environment for patients, staff and visitors. Fortunately, rubber flooring offers multiple benefits to meet multiple challenges. The contribution it makes to things like improved indoor air quality; a clean, hygienic environment; slip and stain resistance; comfort underfoot; good acoustics; and an environment that protects against electrostatic discharge goes a long way toward creating safe spaces that foster healing and protect the health of everyone it supports.



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