

The Benefits of Soft Surface Flooring

the hard facts.

Point/Counterpoint: Hard vs. Soft.

When it comes to choosing flooring, we know you have lots of things to consider. And we also know that soft surface flooring isn't the best choice for every type of environment.

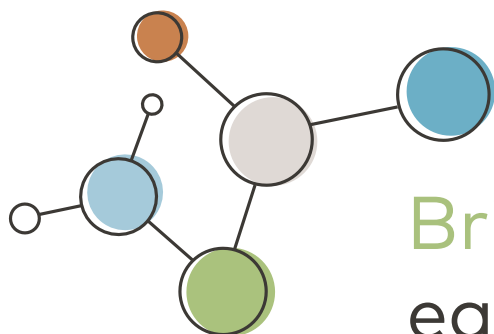
But did you know that soft surface flooring actually out-performs hard surface flooring in many areas and is less costly to install and maintain?

In fact, broadloom carpet, carpet tile, and Kinetex textile composite flooring have numerous health, safety, ergonomic, acoustic, performance, and cost benefits over hard surface flooring like polished concrete, terrazzo, LVT, porcelain, granite, marble, and hardwood.

Read more to find out what they are. Our sales reps will be happy to talk to you about your concerns and answer your questions about our soft surface flooring products.

Hard times are over...

- ① **Health Benefits**
- ② **Safety Benefits**
Slip and Fall Accidents
Reduction and Elimination
- ③ **Acoustic Benefits**
Sound Reduction
- ④ **Ergonomic Benefits**
- ⑤ **Performance and
Cost Benefits**



Bright and shiny equals clean and healthy. Not!

Health Benefits

As one of the most abundant finishes in the built environment, flooring's ability to impact indoor air quality and infection control is significant.

- > Research has shown that soft surfaces are more effective than hard surfaces at inhibiting airborne re-suspension of contaminants.
- > Environmental experts have concluded that carpet can actually improve indoor air quality because it sequesters dirt, contaminants and allergens that would otherwise become airborne.
- > Hard surface flooring such as VCT or porcelain tile, harbor higher levels of bacteria than soft flooring surfaces.
- > While hard surface flooring may be easier to clean than soft surface flooring, because of its ability to harbor microorganisms, hard surface flooring is also more difficult to disinfect or sanitize than carpet. Shiny floors may look clean, but they may still harbor bacteria.

ProSept antimicrobial treatment can be added to our broadloom and carpet tile products. It helps to protect against bacterial and fungal growth and eliminates odors associated with mildew and mold.

ProSept is integral to the backing system and provides permanent protection throughout the life of the product.

Sentir odor blocking technology can also be added to any of our broadloom or carpet tile products.

Cleaning and Maintenance

Regular, proper maintenance of flooring is important to controlling the spread of contaminants in the air.

Simple cleaning removes dirt, soils, and other impurities.

Sanitizers can reduce pathogens on a surface by at least 99.9%.

However, hard surface flooring is more difficult to sanitize than broadloom carpet, carpet tile or textile composite flooring. Despite sanitization, remaining particles on hard surface flooring can be re-distributed into breathing zones and can potentially form contaminated bio-film after wet cleaning.

All of our soft surface flooring products can be sanitized using either **Vital Oxide** or a 50/50 mixture of 3% hydrogen peroxide and water.

Vital Oxide is also on the Environmental Protection Agency's list of disinfectants that meet its criteria for use against SARS-CoV-2, the cause of Covid-19.

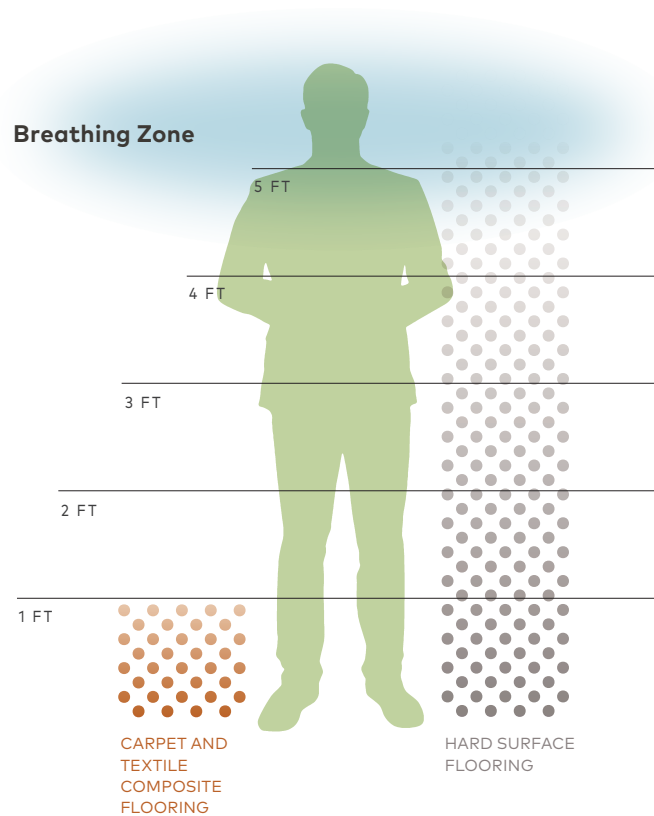
Health Benefits (cont.)

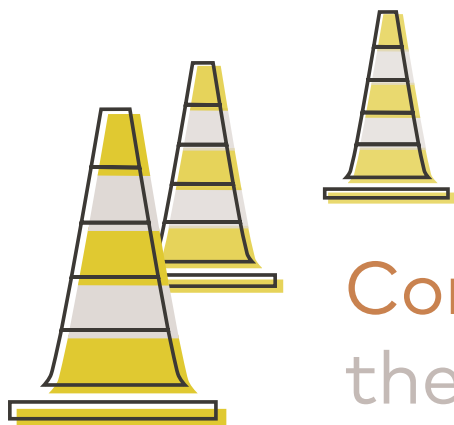
Contaminants can be re-suspended into the breathing zone from the floor by foot traffic. Research has shown that soft surfaces such as carpet and textile composite flooring are more effective than hard surfaces at inhibiting re-suspension of contaminants.

Environmental experts have concluded that carpet can actually improve indoor air quality because it captures and holds dirt, contaminants and allergens that would otherwise become airborne.

Breathing Zone Analysis

Height of Airborne Particulates





Come to grips with the future of flooring.

Safety Benefits

According to the National Floor Safety Institute, floors and flooring materials contribute directly to more than 2 million fall injuries among people of all ages each year. And while people over the age of 65 are at the most risk of slipping, tripping, and falling, these accidents can happen to people of any age.

Costs

Liberty Mutual Insurance company estimates that slips, trips, and falls cost U.S. businesses \$17.5 billion a year due to loss of productivity, increased insurance premiums, litigation, and expenses to train replacement workers. Costs to individuals include lost wages and out-of-pocket healthcare expenses for treatment and hospital stays. In addition, individuals may incur ongoing expenses for medical care for chronic conditions that may result from an accident, such as pain, anxiety, or depression.

Surface Traction, Transitions, Glare

Slip-resistance is a measure of surface traction. Carpet, which also has a high degree of surface traction, has been clinically proven to reduce up to 90% of slip and fall claims.

All of our soft surface flooring products provide exceptional slip resistance, helping to prevent slip and fall accidents before they occur.

The severity of injury may also vary with flooring type. When compared to hard surface flooring, flooring that can absorb the energy of impact such as broadloom, carpet tile, and Kinetex has been shown to significantly reduce fall-related injuries among older people.

Even with compliant (low-stiffness) flooring underlayment, vinyl flooring has not been found to be effective at preventing serious fall-related injuries. Forty-six percent of people who fall on hard, shiny surfaces suffer injuries requiring medical attention, compared to 17 percent of people who fall on soft surfaces.

Coefficient of Friction

*Wet soapy surfaces



Kinetex is the only wall-to-wall textile floorcovering certified as High-Traction by the National Floor Safety Institute.



A sound choice when noise level matters. And when doesn't it?

Acoustic Benefits

Noise is typically defined as unpleasant and unwanted sound. High noise levels worsen patient and staff outcomes in hospitals, hinder teaching and learning in schools, and negatively impact productivity in offices.

Hard surface flooring absorbs little or no sound and has greater potential to transmit sound, contributing to a noisier environment. In contrast, soft surface flooring absorbs significantly more sound and transmits less sound, contributing to a quieter environment.

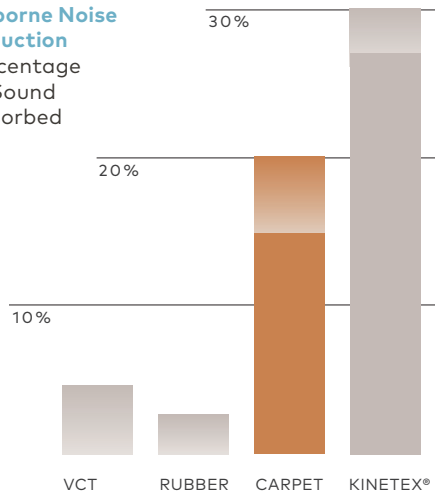
Reverberation Time

Reverberations are continuing effects of a sound. Like echoes, they occur when sound waves strike a surface and are reflected back into the space. Test results show that soft surface flooring mutes reverberation better than hard surface flooring.

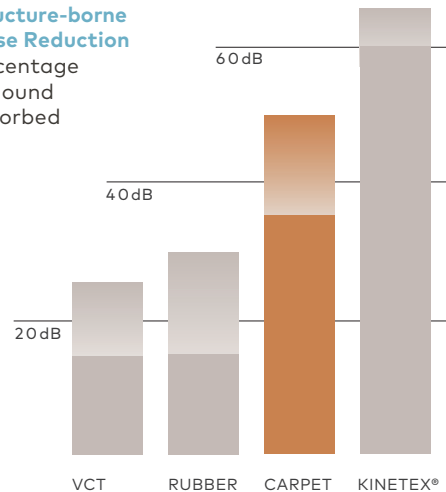
Structure-borne Noise Reduction

Soft surface flooring are also better than hard surface flooring in reducing impact sound transmission, such as footsteps and objects dropping into spaces below.

Airborne Noise Reduction
Percentage of Sound Absorbed



Structure-borne Noise Reduction
Percentage of Sound Absorbed



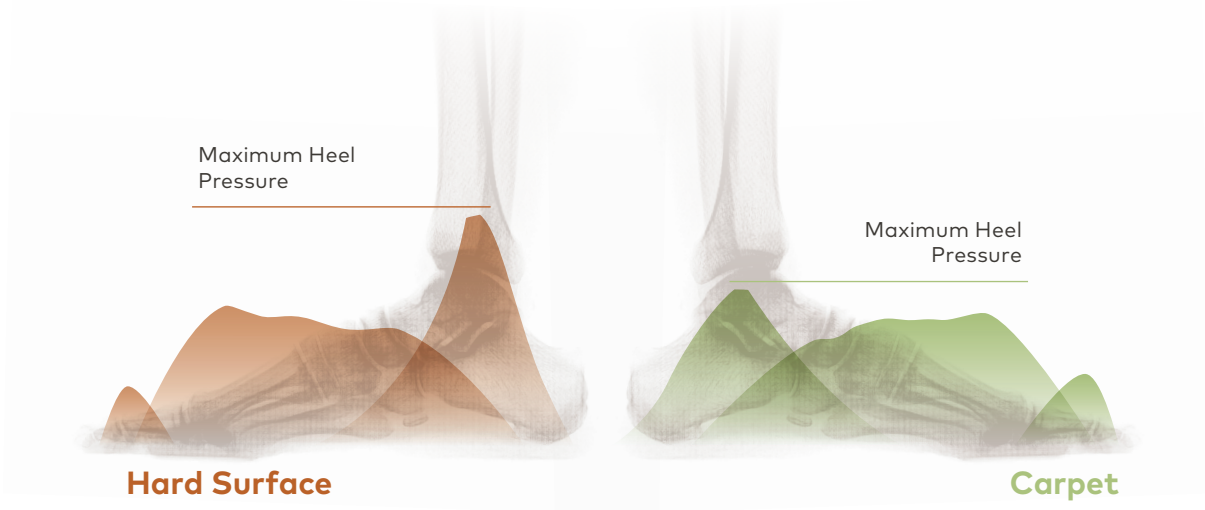


Stand up for comfort!

Ergonomic Benefits

Prolonged standing at work has been shown to be associated with a number of potentially serious health outcomes, such as lower back and leg pain, cardiovascular problems, fatigue, discomfort, and pregnancy related health outcomes. Many of the workers who go long stretches without sitting down are in service industries, such as healthcare, education, retail, and food service.

- > The type of flooring surface can cause increased stress on the structure of the foot, as well as contribute to joint compression, and poor blood circulation.
- > Several studies have examined the influence of floor surfaces on the body during prolonged standing, and results show that softer floor surfaces usually result in less postural discomfort than standing on hard floor surfaces.



Ergonomic Benefits (cont.)

Anti-fatigue Properties

Specifying flooring with anti-fatigue properties can help prevent heel spurs, which is the most common injury to feet.

Although there are few standards for flooring anti-fatigue performance, the type of testing that is used in the athletic footwear industry to develop running shoes and man-made athletic surfaces suggests that rubber and resilient vinyl flooring are not anti-fatigue surfaces, whereas some types of carpet are. Also, independent laboratory tests show that carpet and Kinetex have anti-fatigue properties.

Our Nexus cushion and EndurePlus backing systems provide additional underfoot comfort and noise-reduction properties for broadloom, carpet tile, and Kinetex.

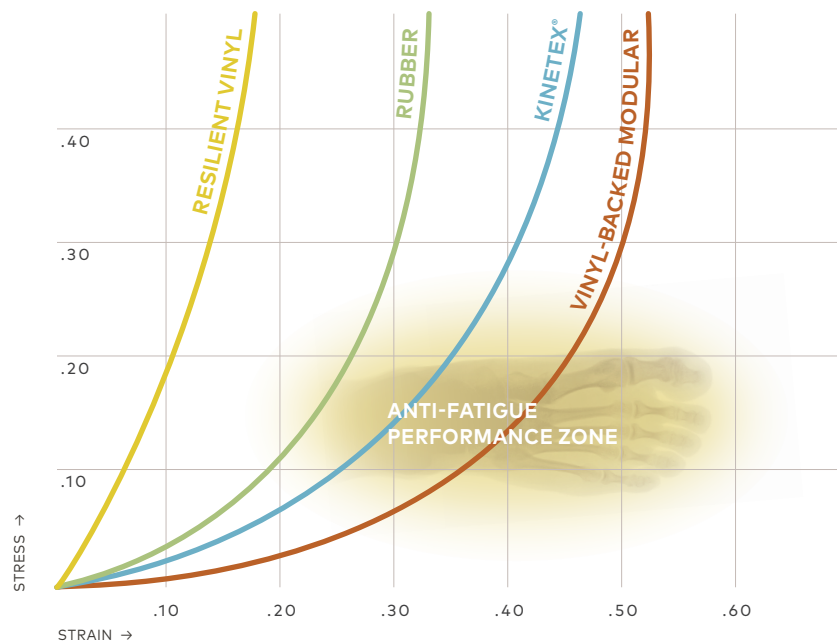
Rolling Mobility

Independent laboratory tests reveal that not all carpet has the same rolling resistance – the amount of force needed to push heavy rolling equipment forward from a stopped position.

- > Carpets with cushioning have higher rolling resistance and greater pushing-related injury potential.
- > Broadloom carpet, modular carpet and Kinetex have rolling resistance similar to hard surfaces, which have lower pushing-relating injury potential than carpet with a cushion.

Kinetex and our low-profile, high-density broadloom and carpet tile products are specifically engineered for ease of rolling mobility.

Cushioning Properties of Flooring





Bottom line: the cost
benefits of soft flooring
are hard to ignore.

Performance and Cost Benefits

Our soft surface products are engineered for long-term performance and appearance retention capability. With proper maintenance, they can last more than 20 years.

This, of course, depends on the type of environment and the traffic load the flooring is subjected to. Corridors and entrance areas are among the heaviest traffic areas in any facility.

Installation Costs

Soft surface flooring is less costly to install than hard surface flooring.

- > Soft surface flooring installed costs range from \$1.75 - \$6 per sq. ft., depending on the product type, quality, and type of project.
- > Hard surface flooring installed costs range from \$2.50 - \$25 per sq. ft. and more, depending on the product type, quality and type of project.

Maintenance Costs

Soft surface flooring is also less costly to maintain than hard surface flooring.

Over a 10-year period, the annual maintenance cost for 3,000 sq. ft. of broadloom carpet, carpet tile, or Kinetex is about \$210 or .07 per sq. ft. This is about half the cost of LVT or rubber.

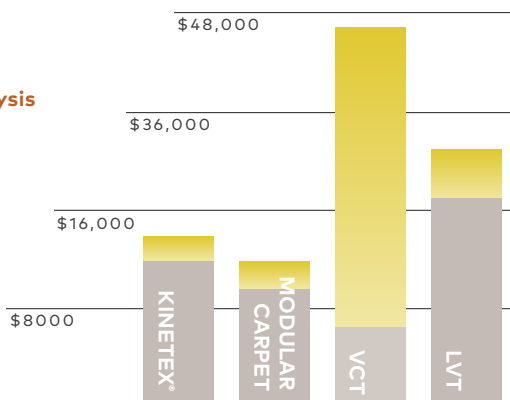
Use our **lifecycle cost analysis tool** to calculate and compare square foot costs of broadloom, carpet tile, textile composite flooring, sheet vinyl, VCT, LVT, and rubber.
www.floorlifecost.com

Lifecycle Cost Analysis

10 year cost for a
3000 sq. ft. project

Total Cost After
Maintenance

Materials, Freight
and Installation



Performance and Cost Benefits (cont.)

Lifecycle Costs

When calculating the lifecycle costs of flooring, it's not enough to consider just the amount on the invoice or the installed cost. You need to look at the cost of demolishing existing flooring, subfloor prep work, flooring and installation materials, freight, and ongoing maintenance.

To get a true picture of a flooring product's total cost of ownership you should also factor in the extent to which the product may reduce or increase the risks of flooring-associated injuries or respiratory conditions, and the direct and indirect costs associated with those injuries and conditions.

Factors Influencing True Total Cost of Ownership

(Acute Healthcare Setting Example)

