Tandus | Centiva
A Tarkett Company

At Tandus Centiva, a Tarkett company, our mission is to help educators, facilities managers and design professionals provide the best environments for engaging children and inspiring them to learn. We are also committed to the development of products that establish and sustain healthy environments before, during and after installation. The construction properties of our Powerbond® hybrid resilient sheet flooring, a variable cushion tufted textile (VCTT), has been scientifically shown to significantly reduce fumes from VOCs (volatile organic compounds), as well as exposure to particle contaminants. Of special note is the reduction in settled dust on hard surfaces, which is associated with "sick building syndrome" and is a trigger for allergies and asthmatic episodes.

FACTS:

10 Approximate percentage of school-age children who have asthma.[1]

13 Missed school days per year, in millions, related to asthma.[2]

80 Percent of individuals with asthma who are also sensitized to one or more allergens.[3]

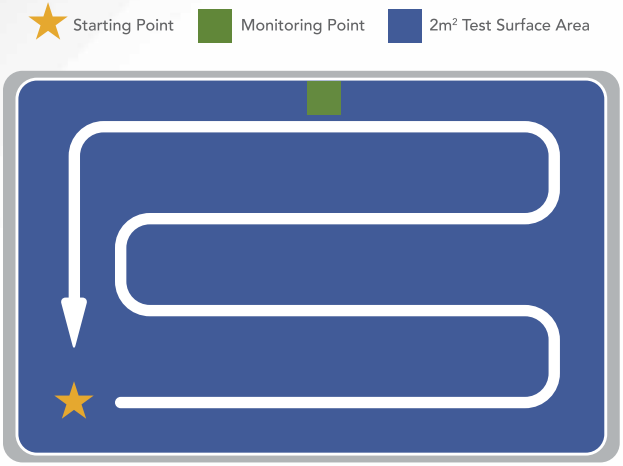
791 Total economic impact, in dollars, per school-age child with asthma.[4]

>4 Annual cost, in billions of dollars, associated with teacher absences.[5]

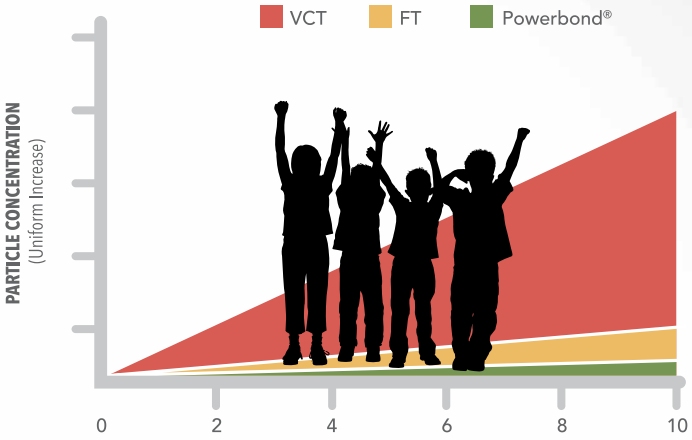
Children are at a significantly higher risk, due to their location in the breathing zone, of exposure to resuspended dust and particle contaminants found in various flooring types. Powerbond hybrid resilient sheet flooring provides the healthiest environment for all room occupants.

"Well-maintained textile flooring localizes, captures and holds particulate matter until it can be removed from the space with regular cleaning. For similar loadings of dust, on hard flooring and Powerbond hybrid resilient textile flooring (VCTT), the hard flooring products have a greater potential to allow dust particles to flow freely into the breathing zone."

Richard J. Shaughnessy, Ph.D.
Program Director, Indoor Air Quality Research
University of Tulsa



PATTERN OF WALKING ON TEST FLOORING



TIME IN MINUTES

FACT: Powerbond® hybrid resilient sheet flooring reduces exposure to resuspended dust by 12.8x. (The "pig pen" effect)

Vinyl Composition Tile (VCT)

Flow-Through Carpet (FT)

Powerbond®
Hybrid Resilient Sheet Flooring

We already know it's quieter. We know it's easier to maintain.

Now we know it's healthier.

The information contained in this brochure is based upon a series of experiments that were conducted to evaluate characteristics of varied flooring types which may influence dirt buildup and airborne particle levels. The experiments included investigation of typical dirt loadings found on flooring in school environments, the time necessary to effectively vacuum dirt from textile flooring (both in chamber and school conditions), and the resuspension of particles generated from walking activity on various flooring types in chamber and classroom environments. The flooring types studied included textile floored surfaces (flow through (FT) carpet and variable cushion tufted textile (VCTT) floorings) and hard surface (vinyl composition tile (VCT)).

The study demonstrates that dirt buildup on textile floors will vary based on the location within the classroom. One of the primary findings of the study is that textile floor covering in schools is not a homogeneous medium. Physical characteristics vary based on the type of backing, carpet tufted type, face weight, gauge (including stitches/inch), and adhesive requirements. This variance in physical parameters contributes to significant differences in the resuspension rates (RRs) of particles into the air generated by walking activity. FT carpet displayed significantly greater (2.5 - 5 times) RRs than VCTT in both chamber conditions and classroom environments at similar floor loadings and particle size ranges. Controlled chamber test runs revealed VCT flooring exhibiting 3.6 times higher RRs than FT flooring and 12.8 times greater RRs than VCTT flooring. Moreover, particle RRs and airborne concentrations are also a function of time of walking activity, floor dust loadings and particle size ranges.

[1]American Lung Association (2007). Trends in asthma morbidity and mortality. Retrieved from http://www.lungusa.org/atf/cf/%7B7a8d42d2-fcca-4604-8ade-7f5d5c762256%7D/ASTHMA_TREND_Nov2007.PDF
[2]CDC. Asthma Prevalence, Health Care Use and Mortality, 2003-2005. National Center fo Health Statistics. Washington, DC.
[3]Hall MJ & DeFrances CJ. 2001 National Hospital Discharge Survey. Advance data from Vital and Health Statistics, Table 3; no 332. Hyattsville, MD: NCHS, 2003.
[4]Wang LY, Zhong Y, Wheeler L. Direct and indirect costs of asthma in school-age children. Prev Chronic Dis [serial online] 2005 Jan [date cited]. Available from: URL: http://www.cdc.gov/pcd/issues/2005/jan/04_0053.htm.
[5]Marguerite Roza, "Frozen Assests: Rethinking Teacher Contracts Could Free Billions for School Reform" (Washington: Education Sector, 2007).

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