## TECHNICAL BULLETIN Application

## **XLBrands**<sup>®</sup>

## **Vinyl Flooring Indentations**

## AVERTING VINYL FLOORING INDENTATION

To prevent surface indentation the correct vinyl flooring should be used; capable of enduring the types of furnishings and equipment it is going to be exposed to. The proper type of adhesive should be used to install it and should be indicated by the vinyl flooring manufacturer. A vinyl flooring should be tested for indentation prior to using it in a high traffic environment such as; Schools, Hospitals, Offices, Institutional facilities and Health Care facilities. One should specify different wheels or feet on equipment or furnishings to prevent indentation of the vinyl flooring. It is also recommended reading the TDS (Technical Data Sheet) on the vinyl flooring product to see if it is rated for the type of traffic and use it is going to be exposed to. Vinyl flooring products have been used for years without problems but you need to know what to use, where to use it and how to use it. The right product exists for every application.

Understand also that a vinyl flooring can be affected by 'job site' and 'installation' related concerns. Moisture in the concrete substrate may also be a cause for indentations and wheel marks especially with sheet vinyl flooring. Moisture in the concrete substrate can soften the adhesive causing it to become gooey and allow rolling wheels to leave marks in the vinyl flooring that make the surface look like track marks on the floor. Subsequently welded seamed sheet goods are not permeable, moisture in the substrate can soften adhesive, allowing the vinyl flooring to release and become more easily susceptible to indentations.

Most surface indentation concerns are being produced in schools and hospitals and most adversely affected is sheet vinyl and vinyl tile. LVT or vinyl plank rarely have issues. The improper application of adhesive (called adhesive displacement) can be a factor causing indentation, caused by; wrong trowel used, too much adhesive, too little adhesive applied to the substrate. This can be prevented if the installer follows the proper adhesive installation instructions. Improperly applied floor prep products such as floor patch, leveling materials, which may be over watered, will weaken the density of the substrate below the vinyl flooring allowing an indentation to form. A weakened, soft substrate will allow furnishings or equipment when statically positioned in place to compress the vinyl and the substrate and cause indentations in the vinyl flooring.

A Hospital bed with a heavy patient can weigh up to 900 pounds and if the beds have thin, sharp profiled wheels they can cause indentations in the vinyl flooring. A larger, wider hospital bed wheel would be recommended to help prevent indentations in the vinyl flooring. A larger hospital wheel will better disperse the weight of the bed onto the surface of the vinyl flooring; hence not creating an indentation. The same holds true for furniture legs when statically placed on a vinyl floor; the larger the foot on the furniture leg the less likely it is to create an indentation in the vinyl flooring.

A wrong product specified is another major cause resulting in vinyl flooring indentations. Vinyl flooring materials are typically rated at 125 to 250 (PSI) pounds per square inch for compression loads. An issue begins when facilities expose the vinyl flooring to over 900 pounds of pressure; it is beyond the vinyl flooring's wear limits.

No vinyl flooring is completely unaffected by indentations. If the load on the flooring is heavy enough and the area of concentrated pressure small enough that it does not dissipate the load over a larger area, indentations can occur.

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