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What's Underfoot: Selection and Care of Resilient Floors¹

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Resilient floors are flexible and have a degree of built-in comfort underfoot. Before you select resilient flooring for your home, consider these points.

- C **Traffic.** The heavier the traffic, the more durable the material should be.
- C **Location.** Where will it be used? What type of dirt and stains will it receive? Should it be "quiet?" Some resilient floors are more cushioned than others for noise insulation.
- C **Comfort.** Very important if you are standing or walking in an area for long periods of time. It's not so important in a foyer or a hallway!
- C **Furnishings.** Consider the color, pattern, scale and theme of the area.
- C **Maintenance.** Be realistic about your maintenance plan. Do you want to give minimal care to the flooring, or are you willing to select a floor that will require constant care?
- C **Installation.** Will a professional install the floor, or will it be a do-it-yourself project? Some floors are easier to install than others.
- C **Subflooring.** Is the subfloor damp? Does it have irregularities such as cracks, hollows and bumps? If the flooring is to be installed below ground level, you will need a moisture-resistant flooring material. If it is to be installed above ground level, the weight of material must be considered.
- C **Cost.** Consider the installation cost, plus other materials involved in the job. What is the life expectancy of the material compared to the total cost?

Consider Before Buying

Color, Texture, Light. Flooring should express the character of the furnishings — traditional, modern, formal or casual. The flooring can be the center of interest, or play a supporting role to a fireplace, window, painting, rug, or furniture grouping. Very light or very dark colors tend to show lint and footprints, and accumulate dust more readily than medium colors.

Glossy, smooth, and plain surfaces show soiling, damage, and irregularities. They can also produce glare. Patterned, less glossy surfaces hide most of

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these things. Sometimes a pattern camouflages too much, making it difficult to find items dropped on the floor. Embossed floors (those having a textured surface) soften light reflection and produce an interesting texture. They are more difficult to maintain because soil collects in the indentations.

The amount of light reflected by surfaces in a room influences how easy it is to see in that area. White and light colors reflect more light than dark, absorbing colors. Dark floors in a room may make it necessary to use lights, even during daylight hours.

Comfort, Insulation and Quiet. The subfloor material affects comfort as well as the composition of the floor cover. A concrete subfloor is less comfortable than a wood subfloor. A cushioned flooring on concrete helps reduce leg fatigue caused by standing and walking. Thicker cushioning will also provide some insulation from weather.

Noisy foot traffic can be annoying. Resilient floor covering tends to be less noisy than hard floors, but noisier than carpet and rugs. Cushioned floors will be less noisy than hard floors, but noisier than carpet and rugs. Cushioned floors will be less noisy than some of the harder, smoother resilient floorings.

Safety. Floor covering should have a surface safe for walking and other activities. When wet, smooth surfaces are more slippery than textured surfaces. The transition between two different floor coverings should be smooth, to prevent tripping. Don't change colors abruptly when designing areas for the elderly, for they often see the changes in colors as changes in elevations. Seams should be placed in areas receiving the least traffic, away from areas used for working, such as in front of the range, sink, or laundry equipment. Several thin layers of wax or floor finish are less apt to make a slippery surface than a thick coat of wax.

Installation. Most sheet goods or tiles can be installed over existing flooring, unless the old flooring is embossed or cushioned. The old floor should be in good shape, smooth, and firmly bonded to the subfloor. If it is in poor shape, embossed, or made of cushioned vinyl, first cover it with ¼-inch

sheets of exterior grade plywood; or install an elastic-backed, cushioned vinyl flooring. Elastic-backed flooring is adhered only around the edges. If large holes or gouges are present in the floor, use plywood or hardboard.

Seams in sheet vinyl floors must be sealed with an epoxy from underneath, or a chemical flushing from the top. The wrong type of underlay, or a poor installation, can cause seams to open. This will detract from the appearance of the flooring, and ultimately allow the floor to totally deteriorate. Check manufacturer's installation recommendations and hire a reliable installer. If a seam begins to open, have it fixed before the problem gets worse. A flooring surface should be dry before installing a new resilient floor. If not, the subfloor may shrink after the flooring has been installed.

When remodeling, do not sand resilient tile or sheet flooring, backing, or lining material. These products may contain asbestos fibers, and sanding may release fibers into the air, which can cause asbestosis or other health problems if inhaled.

Ease of Repair. Vinyls will melt or char if a match, hot coal, or burning cigarette is dropped on them. Abrasives will scratch vinyl and dull the surface. Scratched vinyl is usually not repairable. Technology has now produced a vinyl that will not scratch, so this soon may cease to be a flooring problem. If you have some extra pieces of the original flooring, you may be able to cut away the damaged area and replace the damaged section. A floor with a pattern is usually easier to repair, because if the pattern is matched properly, the repair job is less noticeable. Depending on age, color, and various other circumstances, the color in the replacement piece may differ from that on the floor.

Cost. Compare initial cost with long-range cost. If you pay more per square foot for something that will last twice as long, the long-range cost will be less. Does the installed cost include all subfloor preparation? In some cases, new flooring can be installed directly over the old; in other cases, the old must be removed. Discuss this prior to purchase.

Resilient Flooring

Sheet Material

Sheet flooring comes in widths of 6, 9, and 12 feet. Buy the length that fits the room with the smallest number of seams. Sheet goods are sold by the square yard, and are available in a wide range of prices.

Although sheet goods are more expensive than tiles, they are easier to maintain and come in a wider variety of designs. Some types of sheet goods are also recommended for areas where moisture is a factor — such as a bathroom, where tiles can come loose. Select a type with moisture-resistant backing.

Sheet materials are not as easy to install as tiles. Installing some of the heavier types of sheets may require a professional. Depending upon the size and shape of the area, there can be more waste with sheet goods than with tiles. The two main types of sheet goods are inlaid and rotovinyl.

Inlaid Vinyl. Considered the better type because it is more durable. It consists of several layers of tiny vinyl granules fused with heat and pressure. The different colored granules are arranged to form a design. Since the color and design are part of the floor, and not merely on the surface, they will last until the floor itself wears out. Inlaid vinyl is thicker than rotovinyl, and may be more difficult to install. Some inlaid vinyl is available with a cushioned backing for extra resilience, comfort, and noise insulation. A wear-layer of urethane or vinyl can be added to give it a "no-wax" surface. The vinyl wear-layers are generally thicker, but urethane is a stronger and longer-lasting finish.

Rotovinyl. The design is photographed and printed on it. A wide array of designs are available, with realistic images of wood, slate, brick, and stone. It can be embossed for a 3-D look, but this causes added problems because dirt collects in the cracks. The design can be printed directly onto a vinyl layer or a layer of cushioning. However, because the design is printed on top, it will eventually wear away. A 3- to 25-mm thick wear-layer made of clear vinyl or urethane is applied to the surface to protect the material and the design. The Federal Housing Authority requires a minimum wear-layer depth of 10

mm, which under normal conditions, will last about 10 years. Of course, the thicker the wear-layer, the higher the quality and the price.

Because the cushioning is near the surface, it can be dented or torn easily by furniture and other objects. To test floor samples, dig your thumbnail in and see how long it takes for the sample to recover.

Rotovinyls with thinner wear-layers can be used as loose-lay rugs over flooring without permanent installation.

Tiles

Tiles are available in various materials, including vinyl, vinyl composition, asphalt, rubber, and cork. They are usually 9- or 12-inch squares. Tiles are fairly easy to install. Many have self-adhesive backings that eliminate the need for special glue. You can mix and match patterns to create a flooring design. Check the dye lot number so you can replace any damaged tiles easily.

Solid-Vinyl. Made the same way as inlaid sheet vinyl, but in tile squares. They are available with a no-wax finish.

Vinyl Composition. Tiles have been developed without asbestos since asbestos in the home has become a concern. However, these tiles are less resilient than solid-vinyl tiles, and are used primarily in commercial installations.

Asphalt. Used less frequently than in the past. They are porous and stain easily. They are noisier and dent more easily than vinyl and vinyl composition tiles. They may even crack from the weight of heavy furnishings or a sharp blow. Asphalt tiles, however, are not harmed by moisture, and can be used over concrete and below grade.

Rubber. Tiles today are usually synthetic, rather than natural rubber. They are quiet, durable, slip-resistant, and very resilient. Rubber tiles are available in handsome, clear colors in either a solid or marbled design. Rubber tiles, however, are prone to staining and denting. They can be used on or above grade, and over concrete, but not below grade. They are available in sizes from 9-inch squares to 18 × 36-inch tiles.

Cork. Tiles can be used above grade in Florida homes, but should not be used on or below grade, or over concrete because of moisture damage. Cork tiles can be sealed or unsealed. Grease and soil will stain unsealed, plain cork tiles, so select sealed cork tiles that have a wear-layer of vinyl or urethane for easier maintenance. For best results, use a cork sealer on unsealed tiles. Varnish, shellac, lacquer or polyurethane can be used, but require more maintenance. Cork tiles are moderately durable, but aren't the best choice for high-traffic areas. Because they are handsome and absorb noise, they are ideal in a study or bedroom. However, cork tiles are moderately expensive.

Resilient Floor Care

Everyone likes a shiny, new-looking floor. With newly installed resilient flooring, wait at least a week before placing heavy objects on the floor, moving heavy things about, or washing the floor. Permanent denting can occur if the adhesive is not thoroughly dry. Washing the floor too soon can permit moisture to penetrate the not-yet-dry adhesive and cause problems.

Resilient floors can be damaged by cuts, nicks, and gouges. Rotogravure sheet vinyl is most susceptible to cut damage; a cut in the clear vinyl wear layer can collect soil and become discolored.

Wax build-up in low-traffic areas yellows over time. Removal of old wax layers usually solves this problem. Solvent-based waxes are removed with each new application; water-based, self-polishing waxes build up. To remove the wax, wash the floor with a mixture of 1 cup ammonia, ½ gallon of water, and ¼ cup powdered floor cleaner. Leave the mixture on the floor 3 to 5 minutes, then scrub with a nylon or plastic scouring pad to remove the old wax. Wipe the residue away and rinse the floor thoroughly.

Discoloration

Rubberized rug or carpet backings, furniture protectors, or other colored-rubber placed on top of a resilient floor can transfer color to the flooring. This is especially true in damp areas. Sometimes bleaching or scrubbing with a mild abrasive will

remove the color from the resilient floor cover. However, many times the color transfer is permanent.

Pigments used in floor coverings have been greatly stabilized in recent years, but exposure to strong sunlight may fade floor colors. Fading is most noticeable on floor covers in pastels, pinks, yellows, and reds. Neutral colors show the least fading.

In high moisture areas the backing may discolor the floor surface. Excessive heat darkens some resilient flooring, especially under refrigerators and around heat registers.

Yellowing can be caused by dirt trapped between coats of polish. To remedy this problem, remove and reapply the polish. Sometimes changes in floor coloring are permanent. Exposure to strong sunlight, blockage from all light, or tracked-in asphalt or tar can cause color changes.

Stains. Unless removed immediately, some household substances and foods permanently stain resilient floor coverings. Shoe polish, paint, dyes, mustard, and fruit drinks (especially grape) are all damaging. Bleach or a mild abrasive can remove a stain, but there are no guarantees.

Sticky, Tacky Floors or Flaking Polish. These problems can be caused by wax build-up, high humidity, insufficient rinsing, applying wax too heavily, or insufficient drying time between coats of wax.

Recommendations

Prevent surface scratches by keeping floors clean. Scratches catch dirt, eventually causing a dull appearance. Wax on a floor finish will protect the surface of the flooring material. Select a product designed for use on the type of flooring you have. Wax is water-based or solvent-based. Use only water-based products on rubber or asphalt tile. Solvent-based products can usually be identified on the label by the terms flammable or combustible. Naphtha, a solvent, will soften and cause small holes in rubber or asphalt.

No-Wax Vinyl. Routinely vacuum and damp mop to remove normal household dirt. Follow any

care recommendations provided by the manufacturer. Most no-wax vinyl can be cleaned with a mild, soap-free detergent, although several detergents are made specifically for no-wax floors. Always rinse your floor thoroughly, to prevent dullness from residue. To restore sheen after heavy wear, use a no-wax product to clean or add shine.

Vinyl and Vinyl Composition Flooring.

Maintain no-wax vinyl flooring in a manner similar to no-wax floors, except use a water-based wax. Avoid using paste waxes and other solvent-based waxes because they can discolor vinyl, causing a yellow buildup.

Asphalt/Rubber Tiles. Avoid harsh cleaners, strong soaps, scouring powders, or solvent-based waxes on asphalt. Use a mild detergent and water-based wax regularly.

Cork Tiles. Cork should be cleaned in much the same way as wood. Neither flooring responds well to water, soap, detergents, or ammonia. Instead, use a solvent-based cleaner/polisher recommended for wood floors.

Linoleum. Not produced today. Vinyl flooring has replaced it. If you have linoleum, clean it with a mild detergent, and use only water-based wax. Never finish it with a varnish or shellac. They will harm the floor beyond repair.

Warranties

Read your warranty carefully. It will provide you specific legal protection. Limitations do exist that relate to use, maintenance, rolling casters under furniture and appliances, abuse or accidents and stains, and damage from moisture and alkaline substances in the subfloor. Select resilient flooring that can be installed in your home, and matches your decor.