FLOORING

Flooring is the general term for a permanent covering of a floor, or for the work of installing such a floor covering. Floor covering is a term to generically describe any finish material applied over a floor structure to provide a walking surface. Both terms are used interchangeably but floor covering refers more to loose-laid materials.

Materials almost always classified as flooring include carpet, laminate, tile, and vinyl.

The floor under the flooring is called the subfloor, which provides the support for the flooring. Special purpose subfloors like floating floors, raised floors or sprung floors may be laid upon another underlying subfloor which provides the structural strength. Subfloors that are below grade (underground) or ground level floors in buildings without basements typically have a concrete subfloor. Subfloors above grade (above ground) typically have a plywood subfloor.

FLOORING MATERIAL

The choice of material for floor covering is affected by factors such as cost, endurance, noise insulation, comfort, and cleaning effort. Some types of flooring must not be installed below grade, including laminate and hardwood due to potential damage from moisture.

The sub-floor may be finished in a way that makes it usable without any extra work, see:

- Earthen floor adobe or clay floors
- Solid ground floor, cementitious levelling/wearing/granolithic screeds]polymer-modified concretes and levelling/wearing screeds.

Hard flooring

Hard flooring (not to be confused with "hardwood") is a family of flooring materials that includes concrete or cement, ceramic tile, glass tiles, and natural stone products.

Ceramic tile are clay products which are formed into thin tiles and fired. Ceramic tiles are set in beds of mortar or mastic with the joints between tiles grouted. Varieties of ceramic tiles include quarry tile, porcelain, terracotta.

Many different natural stones are cut into a variety of sizes, shapes, and thicknesses for use as flooring. Stone flooring uses a similar installation method to ceramic tile. Slate and marble are popular types of stone flooring that requires polishing and sealing. Stone aggregates, like Terrazzo, can also be used instead of raw cut stone and are available as either preformed tiles or to be constructed in-place using a cement binder.

Porcelain stoneware can be used instead of natural stone. It is a ceramic material like a tile; however, it is typically 20 mm (0.79 in) thick and often comes in squares of 60 cm (24 in).

Concrete or cement finished floor is also used for its ability to be treated for different feel and its durability, such as polished concrete. Epoxy resurfacing of concrete flooring is used to update or upgrade concrete floor surfaces in commercial and residential applications – see seamless polymer flooring section below.

Floating tile flooring, also called modular tile flooring, includes a range of porcelain and ceramic tile products that can be installed without adhesive or mortar. Generally, the tile is rectified to precise dimensions, and fused to an interlocking base. Some products require use of a flexible

grout and others have an integrated grout strip. The advantages include speed of installation, ease of use, reusability, and low cost relative to using traditional tile installation methods.

TYPES OF HARD FLOORING

CONCRETE FLOOR

Concrete floors are completely customizable and provide a great alternative to traditional flooring such as linoleum, carpet, wood, tile, stone or marble. Color choices, textures, patterns and finish options combine for limitless design possibilities. Plus, concrete is extremely durable, long-lasting and easy to maintain. If your home or business has existing concrete subfloors, exposing them and applying a decorative treatment is an affordable and environmentally friendly option.

PROS & CONS

Concrete flooring has many benefits, compare them to the drawbacks below to determine if concrete is the right option for you.

Advantages:

- Can be designed for any budget
- Unlimited creative options
- Requires little maintenance
- Will last for decades (50+ years)
- Resists moisture and stains when properly sealed
- Pet friendly
- Reduces allergens in the home
- Can be heated with a radiant system
- Free of VOCs (volatile organic compounds)

Disadvantages:

- Requires occasional resealing
- Can be difficult to patch
- You may need area rugs for comfort and warmth
- Cracks can develop over time
- Can become slippery when wet

1. **Terrazzo Floors**

Terrazzo floors have been in existence for a very long time, with several floors in the Mediterranean area that are more than 3,000 years old. Terrazzo floors are not resistant to acids due to the high content of marble. Some harsh alkaline solutions will also do considerable damage to an unsealed terrazzo floor. It is generally agreed that the best seal for terrazzo will be waterbased and light in color. X-Cel Plus and Flex are water-based coatings that leave a tough, traffic-resistant surface, when multiple coats are applied. When it is necessary to remove the product, it will not require the harsh, strong alkaline strippers that could lead to damage of the surface. Pour N Peel Stripper is very adequate and safe for this type of floor.

2. Clay and Ceramic Tile Floors

Clay tiles include all types of floor tile having a basic clay composition, which ranges from cheap quarry to the more expensive vitreous or semi-vitreous tiles. They are either glazed, having a glossy surface fused upon their face, or they are unglazed with a duller appearance.

Quarry and other types of clay tile require little in the way of routine maintenance and are comparatively easy to keep clean. Many floors are maintained with a neutral detergent such as Blue Lightning.

Perhaps one of the most common cleaning problems is the removal of hard water deposits and soap scum from washroom and shower floors. Both the deposits left by hard water and soap scum are alkaline; due to the lime content, they cannot be removed with normal types of detergents. This soil can, however, be removed with a mild acid solution such as LAV GLO. The solution should be allowed to act for a few minutes and the floor scrubbed, if necessary, with a nylon or polyester floor pad (brushes work best for grouted floors). After treatment, the acid solution should then be thoroughly rinsed from the floor with clean water.

3. **Brick Flooring**

Brick flooring usually consists of clay, either vitreous or semi- vitreous. Sand, lime, and concrete bricks can also be used for flooring. Normal maintenance should be carried out by sweeping, followed by washing with a solution of neutral detergent, such as Blue Lightning. Sealing is not generally recommended for brick floors. However, if a sealer is desired to protect grout, two coats of a water-based acrylic seal, such as Aquathane HP, would work well

4. Natural Stone Floors

Marble, granite and limestone are the most common floor and tile types that you will encounter. In most situations it should not be necessary to seal natural stone floors. However, it is recognized that in some circumstances a seal may be desired to protect the cement or grout and

occasionally to add gloss to the surface. If the floor is subject to heavy traffic it may require resurfacing on a stringent maintenance schedule. For these occasions, a water-based, acrylic type seal that is water-white in color while possessing non-yellowing characteristics should be selected.

5. **Slate**

Slate can be found both indoors and out. Slate can be a problem since it contains high clay content and will often flake, spall, and easily develop efflorescence. This is especially true in wet areas. Slate is best treated with a high quality finish such as Granite.

6. **Shellstone or Coquina**

Shell stone or Coquina is limestone composed of broken fragments of shells and corals. It is a sedimentary material and is very porous. Its shell or cord fragments easily identify it. It is a very abrasive stone and should not be resurfaced.

7. **Flagstone / Bluestone**

Flagstone is a term given to almost all stone material cut into thin, irregular shapes. It is found extensively on sidewalks, foyer entrances, and Pool decks. Flagstone should be cleaned and sealed with a penetrating sealer; such as Granite.

8. **Soapstone**

Soapstone is one of the softest materials, which is composed of the mineral talc. For this reason it makes an excellent carving material and can be found on fireplace surrounds and hearths. For maintenance purposes, it is treated like marble.

9. **Sandstone**

Sandstone is a sedimentary material that consists of sand crystals cemented together with natural clays. Sandstone is very porous and should be sealed with a penetrating seal such as Granite.