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How To Chose The Right Floor For Your New Brewhouse

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Beer and the associated chemicals commonly found in a brewery will erode concrete! In time they will eat completely through the concrete slab. A floor covering that can withstand these chemicals and keep them from attacking the concrete is required! You also need a floor that is hygienic, won't support micro organism growth, it's slip resistant, durable and easy to clean.

The options below provide solid solutions that differ in cost and longevity.

You have 2 basic options*, and sealed concrete shouldn't be one! The first would be an industrial coating. These would consist of either an Epoxy floor coating, or an Urethane floor coating. The cost of these options can vary greatly depending on the exact coating that you are talking about. Typically epoxy coatings are less costly, yet have a shorter service life, typically 4-7 years. Urethane coatings tend to be more expensive and have a longer service life, of 7-10 or more years. However, each of these examples have a limited service life as they are both susceptible to wear, scratching and chipping. They also both can suffer from fading color and constant change in appearance. Repairing either of these surfaces is possible, however, repairs will never match. Point loading capabilities of the floor are not affected by these options. The second option is a proper Fully Vitrified Tile floor. These tiles are engineered to be extremely durable, and can carry extreme loads. They are completely unaffected by the beer/chemicals that will be on the floor and they don't wear or lose their color. This type of flooring systems will last the life of the building, 20, 30 50 years and more should be expected. Because of the tile thickness and its shape, the point load capability of the floor is increased by these tile floors. There are multiple surfaces available for areas that need extra slip resistance.



Above and below are urethane Coated floors. There are many Color options with these coatings.



Below is an example of an epoxy coated floor. Sand can be broadcast on the surface to give slip resistance.



Aggregate is broadcast on the surface for slip resistance.



Above: Two examples of the common failures of coated floors. Chemicals have attack the drain area on the right, and movement of the concrete slab has made the coating crack and fail. These issues will do nothing but get worse over time.



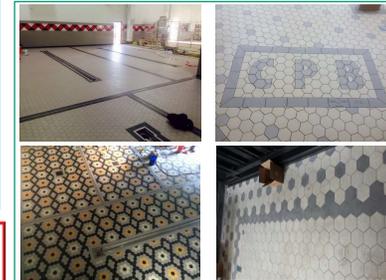
Existing flat concrete slab? Don't cut the entire slab out and replace it, save time and money and have the tile contractor handle it all!



Often the floor for your brewhouse will start as a flat concrete slab*. Typically you may want to cut out the existing concrete, so that it can be installed with proper pitch to allow water to flow to the drains. When installing an industrial tile floor, you may be able to only cut the concrete where the drains and associated piping needs to run, then the tile setter can install a mortar bed that will allow them to install proper pitch and then the tile on top of that. This can save a ton of money and time!

A good rule of thumb is, if you plan on staying at the facility for less than 8 years, quality coatings are an excellent solution. However, if the building will be a permanent facility, only a properly installed fully vitrified floor will provide you that type of longevity.

Summary: Cost and length of use are the most important factors to consider when choosing a floor covering. Epoxy coatings are typically the least expensive, although quality troweled on epoxy coatings can become comparable to the cost of a urethane coated floor. Much the same can be said about urethane coatings as their cost start at the cost of better epoxies, and on the high end they cost as much as a proper tiled floor. The initial cost of a fully vitrified tile floor with proper epoxy mortar beds and epoxy grouts is about the same or slightly more than a high quality urethane floor. The advantage of tile is that it will not wear out, so no reapplications, it never loses its slip resistance and the color won't fade. You should also consider ease of repair, as all of these solutions will need repair somewhere along the way. As stated earlier, repair of coatings can be difficult and nearly impossible to match the color. Whereas tile repairs are fairly easy, cut out the damaged tile, chip out the existing mortar/grout, install new mortar and tile, grout and the repaired area will match the rest of the floor.



Some design ideas in tile.

This was an existing flat slab, where they built up the floor with a mortar bed to give the floor slope and then had to install a ramp to drive forklifts up onto the new floor.



*The first thing to consider is does the concrete slab meet the requirements of the equipment that will be on it, and any local building codes? This presentation will not deal with structural requirements or the concrete slab itself.