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Technical Manual- Concrete Subfloors

General Conditions

Concrete subfloors should be properly cured and dried thoroughly before installation can be started. New concrete subfloors contain a high percentage of residual moisture. The normal time required for concrete to become sufficiently dry is estimated at approximately 28 days/inch thickness of concrete under ideal conditions. This generally applies to concrete up to 20" thick, but drying time should be increased significantly for concrete of greater thickness.

Tile must be installed only on a very smooth subfloor. Underlayment should be used to make concrete subfloor smooth and even.

Warning- Do Not Install Allied Tile over...

- A. Unsuitable existing resilient flooring.
- B. Concrete floors subjected to hydrostatic pressure or water. Chemical agents and additions for waterproofing are not substitutes for a proper moisture barrier.
- C. Concrete floors that are not cured and dry at time of installation. Check floor with a moisture test.
- D. Gypsum or lightgrade concrete products with a density of less than 100 lbs. /cubic foot are not a suitable subfloor. Before installation of tile, cover the lightgrade concrete subfloor with at least 1" thickness of standard concrete.

Moisture Test

Moisture testing of both new and old concrete subfloors is recommended before installation. Perform the test exactly as specified in the directions furnished with the tester. Record all test results and retain with job records.

Perform two tests for every 1,000 square feet and one additional test for each additional 1,000 square feet. One test must be placed near the center of the area and the other must be placed not closer than five feet from the nearest outside wall. All test results shall be lower than 3 pounds/ 1,000 sq.ft/ 24 hours.

If moisture results exceed the maximum tolerance, we recommend that additional time be given for the concrete slab to dry. In cases of old concrete, possible internal and external moisture sources should be investigated.

The test is specific only to the time the test is performed and for the location of the test. Due to the nature of concrete and events beyond the control of those performing the tests, moisture content may vary from the time thereafter. These variations are beyond the control of the flooring contractor.

New Concrete Subfloors

All tile must be installed only on a thoroughly dry concrete subfloor. Drying time will depend on the following conditions: thickness of slab, type of concrete, temperature, humidity and location. Concrete below grade will take longer to dry. The general rule is to allow 28 days per inch.

For concrete on or below grade, a waterproof membrane, such as 6 mil. Polyethylene should be installed between the ground and the concrete.

New concrete subfloors must have level and smooth surface. They must be troweled to a uniform surface and must be free of cracks, ripples, grooves, and divets. Remove all foreign matter from the floor.

Vacuum or brush clean. Mop with a damp mop if dusty condition exists. Allow floor to dry thoroughly prior to installation.

Old Concrete Subfloors

Be sure old concrete subfloors are thoroughly cleaned of all grease, wax, paint and other foreign matter. The floor must be hard, smooth and level. Use recommended underlayment to fill grooves, holes, depressions, and cracks.