

Moisture Vapor Emissions

One of the largest problems facing the resinous flooring industry today is moisture vapor drive associated with concrete slabs on grade floors. Many high quality-flooring installations have failed by blistering and peeling due to moisture vapor drive.

It is not the static water in the ground or slab that we need to concern ourselves with, but the amount of water vapor being emitted from the slab. This water is referred to as dynamic water and results in vapor emissions from the slab, and if not released, may build up considerable pressure on the backside of a flooring system which will then shear along the bond line.

The flooring system materials will be forced off of the slab surface forming blisters when the vapor pressure is greater than the adhesion of the flooring material to the slab or of the integral strength of the concrete. Vapor emissions are expressed as the pounds of water emitted from a 1,000 ft² concrete slab area over a 24-hour period. The vast majority of resinous or seamless flooring material manufacturers and associations recommend a three (3) pound maximum limit for the installation of their products.

Moisture vapor emissions may be most accurately measured by a procedure commonly known as the Calcium Chloride (CaCl₂) test. The CaCl₂ test is the only generally accepted quantitative method to measure dynamic moisture vapor emissions. Mat tests (3x3') or plastic sheet tests (ASTM-D 4263) also measure vapor drive but only in a qualitative fashion. Electronic meters do not measure the dynamic moisture vapor emanating from the slab.

They only measure the static moisture present within the slab. The relevance and accuracy of the above mentioned test methods depend heavily on the frequency and locations of the tests performed. For this reason BASF Performance Flooring offers the following only as a sanguine guideline relative to warranties and moisture vapor emissions;

1. MasterTop epoxy/urethane floors and coatings warrant products on concrete substrates in which 95% of readings average 4.0 lbs/1000 ft² per 24 hours and no individual reading exceeds 5.0 lbs/1000 ft² per 24 hours.
2. MasterTop and Ucrete[®] warrant products on substrates in which 95% of readings average 5.0 lbs/1000 ft² per 24 hours, and no individual reading exceeds 6.0 lbs/1000 ft² per 24 hours.

HEALTH , SAFETY AND ENVIRONMENTAL

Read, understand and follow all Safety Data Sheets and product label information for this product prior to use. The SDS can be obtained by visiting www.master-builders-solutions.basf.us, e-mailing your request to basfbscst@basf.com or calling 1(800) 433-9517. Use only as directed. For medical emergencies only, call ChemTrec® 1(800)424-9300.

LIMITED WARRANTY NOTICE

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