NEWSPAPER floor covering news

Installments: How to treat oil-contaminated concrete

undefined
http://www.fcnews.net/2014/07/installments-how-to-treat-oil-contaminated-concrete/

Volume 28/Number 3; July 21/28, 2014

By Graham Capobianco

In the post-recession construction market, rehabilitation and renovation have become more common than expansion and new construction on undeveloped land. In fact, LEED specifically encourages the rehabilitation and development of existing buildings and Brownfields, or land that had previously been used for commercial or industrial purposes and may contain low levels of hazardous waste or pollution. However, a problem has grown in tandem with this trend: flooring installation complications or failures due to concrete contamination.

In facilities that previously housed warehouses, manufacturing facilities, production plants and mechanical maintenance areas, it is common to find oil, grease and other hydrocarbon contaminates within the concrete slab. Like oil and water, oil and flooring don't mix—hydrocarbons will often act as a bond breaker for flooring adhesives and coatings. When these types of facilities are not properly tested and treated for concrete contaminates prior to flooring installation, these contaminates could cause massive flooring failures.

If you're planning on renovating or rehabilitating a concrete slab that may have been used for industrial or heavy commercial purposes in the past, it is essential to know what is in your concrete before proceeding with any type of flooring installation.

The preferred method of discovery is forensic testing. This typically involves using a concrete core drill attachment to remove "short cores" (3 inches in diameter, 2 inches in depth) from several locations of the concrete in question, especially in areas where concrete appears visibly stained or contamination is anticipated. Once removed, the concrete cores are sent to an independent lab to conduct a battery of tests.

Standard contaminate testing protocols call for an identification of organic compounds,

water-soluble salts or silicates and an analysis to determine the mineralogical and chemical constituents of the uppermost part of the slab.

If the concrete core test results reveal your concrete is contaminated with hydrocarbons, the slab will need to be cleaned and sealed to prevent these contaminates from causing flooring failures. While this may be an inconvenience, it isn't a death sentence. Using the AC•Tech Oil Buster System, the concrete can be cleaned, sealed and ready to receive floor covering within a few days.

This is a two-step system. First, a biodegradable detergent is sprayed onto mechanically prepared concrete and cleaned with a high-pressure, high-temperature floor spinner to bind with hydrocarbons and "float" them to the surface for removal. Most floor spinners have vacuum attachments so wastewater can be vacuumed up and contained for disposal in accordance with federal, state and local hazardous material regulations. Quickly following the cleaning, a two-part, zero-VOC, dense epoxy coating with sand broadcast is installed to effectively seal in any remaining hydrocarbons and prevent them from causing bonding issues and flooring failures.

Once the Oil Buster System has fully cured, subsequent installations of a self-leveling underlayment, patch or feather finish can be installed directly to the cured system. At this point, flooring installation can proceed as usual without concern of oil-related failure.

© 2014 Copyright Floor Covering News. All Rights reserved.