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If you are planning to build a new facility and you intend to have ANY type of resinous coating applied to the floors, this article is a MUST READ!

CURING CONCRETE for COATING APPLICATIONS

When new concrete is placed, a chemical compound is almost always applied to the GREEN concrete a day or two after it is placed. This is done to hold moisture in the slab to cure it. Your architects' specification or perhaps more accurately put the concrete contractor's choice of what GENERIC type of liquid curing agent/compound/membrane he uses can have major financial implications to YOU if you intend to have a coating applied.

If your architect specifies and/or the concrete sub-contractor uses the wrong type of curing compound (even if it meets the ASTM C-309 specification for hydrating the slab);and, it is/was your intention to have a "THIN FILM" roller applied coating installed, you WON'T be able to do it without first completely removing the curing membrane.

Generically speaking there are three (3) types of curing compounds:

Type-A: Chlorinated Rubber based
Type-B: Acrylic based
Type-C: Dissipating Sodium Silicates

Types A & B (Chlorinated Rubber & Acrylic) form a membrane (a usually visible surface sealer). Type-C (Sodium Silicates) penetrate and dissipate and usually show no surface film at all.

One who either intends to have a thin film (paint) coating applied or one who isn't quite sure in the initial planning stages exactly how much money will be left for the floor coating MUST insure himself that Type-C (a Dissipating Sodium Silicate) is used.

When THIN FILM roll down coatings (epoxy and urethane paint) are to be applied the preferred, in fact, the only preparation method that will yield good/uniform results is acid etching. Acid etching is the "OLD FASHIONED" way for preparing concrete. However, if a membrane forming curing compound (A or B above) is used you CAN'T acid etch the floor before first removing the membrane because the acid solution is kept from reacting with the concrete by the curing membrane.

Removing an acrylic or chlorinated rubber curing membrane can ONLY be accomplished by:

A. Dissolving it with an aromatic solvent such as Xylol or Toluol which is laborious and results in HAZARDOUS WASTE.

B. Shot blasting the floor which creates a surface profile that WON'T be hidden by a thin film coating system and will REQUIRE that a high build 100% solids coating be installed - which also costs more.

Another potential "draw back" for using membrane forming curing compounds is that they can hold the moisture in the slab so well that your resinous flooring installer MAY have to remove the membrane/sealer and allow the slab to DEHYDRATE for 30 to 90 days before ANY coating can be applied. This COULD cost a lot more for the contractor to remove the membrane/sealer and have to remobilize two months later to complete the job.

ALL of these potential problems as well as numerous others not mentioned here can be avoided by simply making sure that a dissipating (acid soluble) curing agent is used. Incidentally, don't get a false sense of security that by simply specifying the RIGHT generic curing agent you're guaranteed the RIGHT curing agent will in fact be used. Concrete contractors are NOTORIOUS for using whatever they have on their shelf. One thing is for sure. If the wrong type of liquid curing compound is used, it will cost YOU more than it should to have your floors refurbished.

Best of luck,

William J. Devaney