

VOC COMPLIANT SOLVENT BASED CURE & SEAL COMPOUNDS:

SUGGESTIONS FOR SAFE AND SUCCESSFUL APPLICATIONS

Background: Due to recent changes in EPA standards, Concrete Cure & Seal Compounds have been reformulated nationwide to contain lower VOC contents. Manufacturers such as Specco have developed several new VOC compliant products using EPA approved “replacement” solvents.

What are replacement solvents? These are VOC “exempt” solvents, which are primarily acetone or tertiary butyl acetate based in origin. They are considered exempt because they tend to dry 5-10 times faster than their former solvent based xylene based alternatives, thereby, they do not contribute to smog formation in the atmosphere and are better for the environment.

Due to the solvent changes, there are different application methods and sprayers that must be used to achieve a satisfactory result.

1. Coverage Rates: Traditional Xylene based sealers were applied at 150-200 sq./ft/ gallon at two coat application. The new VOC complaint sealers should be applied much thinner, at 250-300 sq. ft/ gallon., with an additional 3rd coat as needed for uniformity.

2. Dry Times: The new sealers dry much faster than the traditional; Xylene based types, thereby allowing faster recoats. Because of this factor, early morning or late afternoon applications are suggested versus applying at mid day in full sun, which will allow the film to penetrate better and bond before it forms a film.

3. Spray versus rolling: The new VOC complaint sealers should always be applied by sprayer only as they dry too fast for roller applications. If rollers are used, they tend to pull the sealer off the substrate, or “spider web” off the roller leaving uneven marks and patterns.

4. Flammability: These Cure and Seal compounds are flammable where the older traditional sealers were combustible. The difference is that they have a lower flashpoint and their vapors can ignite very easily if they are exposed to sparks or open flame. Do not leave the containers out in the open sun or near sources of heat or open flame. Always store in a shaded area. There should be absolutely no smoking when applying these sealers. Do not apply where someone is welding or cutting with a saw, especially on a windy day as wind can transfer sparks or hot ash to the sprayed area. These Cure and Seal compounds are formulated typically for exterior applications. If indoor applications are selected, consider the use of a water based sealer. If solvent based sealers are selected, make sure all electrical appliances, stoves, water heaters, etc. are turned off, or unplugged to avoid chance of spark.

5. Sprayer Type: Use only a sprayer that is manufactured to spray Acetone based formulations. If weaker sprayer models are used, the Acetone will soften or dissolve the sprayer gaskets and destroy the sprayer head mechanism. Suggestions of sprayers that will work well for these sealers are SP Sprayers SP35ACT or SP10ACT (3 gallon size with tire valve inflator) , Chapin 19049 Extreme, or B&G Concrete Acetone Sprayer. Various manufacturers such as Chapin offer conversion kits for their other solvent based sprayer models, such as their part # 6-5378 which can convert their 1949 sprayer to an Acetone safe model. These 3 gallon “pump up” sprayers are economical and can run up to \$165.00/ unit.

6. Spraying Options: As a more expensive but improved recommendation to the above sprayers, a HVLP (high volume low pressure) unit can be used and is best applied at low air pressure (18-22 lbs) and use wide aperture to increase flow. You can adjust air/flow on the gun, but it is recommended to have a separate inlet adjustable air gauge. Also, a rapid recovery air compressor should be used to maintain constant air pressure. Most high quality HVLP guns are completely solvent resistant, however, such HVLP guns run upwards of \$250-\$300.00. Also, a gravity fed HVLP is not recommended for floor applications, it is not ergonomically designed for horizontal surfaces. A good pressure pot (5 gallons cap) is what is typically used for field applications, using a Hitachi twin tank, gas powdered compressor. The total set up and gun can set you back \$2500.00, which is expensive, but very useful for consistent production

7. Spraying Technique: The new VOC complaint Cure and seal compounds should be sprayed closer to the surface to minimize atomization and allow a uniform, even application.

7. Thinning: VOC compliant sealers are manufactured to a 25% solids minimum specification set by ASTM C-1315 standards. Therefore, no thinning of the product is allowed using either VOC complaint or non compliant solvents, as the solids level would fall below the required standard. Despite this requirement, if thinning solvents are chosen for primer coats or to cut viscosity of the existing sealer, Acetone should be used only as it is VOC complaint and it dries quickly which allows higher gloss or wet look for decorative applications.

8. Clean-up: Always clean out the sprayer with Acetone when finished applying all Cure & Seal compounds. Usually a pint to a quart is enough to purge the sprayer head and clean the tip. You can pump up the sprayer and spray back into the container of Acetone to reuse the material later and not have any waste. Once all of the solvent is out of the sprayer, release the pressure and allow the sprayer head to air dry.

Please contact Specco if you have any additional questions on the use of these Cure and Seal products. Make sure to read all technical data and MSDS information before using the Cure and seal products to familiarize yourself with the product.

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