Trying To Seal An Offgassing Surface?

Follow these procedures for best results.

Wherever possible and appropriate, we incorporate surface sealing properties into AFM Safecoat products such as paints and clear finishes. Many chemically sensitive individuals have successfully controlled offgassing materials using Safecoat, to the extent that they can tolerate environments that were intolerable before.

Every indoor air quality problem, and every surface is different, so there are no guarantees. But follow these basic rules and critical steps for the best chance of success:

STEP 1. IDENTIFY THE PROBLEM

It is crucial to understand exactly what it is on the surface that is causing the problem. Is it a finish, is it in a material under a finish (such as drywall under paint), or is it something 'under' the surface (an example of subsurface contamination might be smelly carpet padding under carpet). The closer the sealer can get to the offgassing material, the more effective it is likely to be. Sealing works best when dealing with chemical emissions. Offgassing from organic and related sources, such as food, pet odors, mold and mildew contamination, cigarette smoke and fragrances can typically not be sealed.

STEP 2. SELECT THE RIGHT AFM SEALER

See chart.

STEP 3. PREPARE THE SURFACE

Proper surface preparation is absolutely required for good results. Tips are on our product data sheets and of course on the cans, but ultimately responsibility for understanding the surface and what needs to be done to make it ready to accept the sealer lies with the installer. Here are a few general tips for preparing your surface:

- Any surface sheen needs to be de-glossed. Mechanical (sanding) de-glossing is the best. There are some chemical de-glossers, such as TSP, but these can leave unwanted residue on the surface that inhibit sealer adhesion, and so are discouraged.

- All patching and repairs should be done and allowed ample time to cure. Consult the manufacturers of these products for appropriate cure times.

- Always make sure your surfaces are clean, dry and dust free.

STEP 4. PROPER APPLICATION

Environmental conditions during and following application are very important. Water based products dry and cure more effectively when surface and air temperature are in the mid 70's with humidity at 50% or lower. If colder or more humid conditions are present, allow more time for drying and between coats.

STEP 5. PROMOTING DRYING/CURING

To promote curing and a stronger, faster seal, MOVE AIR OVER THE COATED SURFACE CONSTANTLY. Simple ventilation is necessary but rarely sufficient. Use of household or, if available, commercial fans will promote evaporation of all moisture in the coating, which is ultimately necessary for creating a strong film on the surface.

Application techniques affect drying/curing times. Thicker coats dry more slowly than thinner ones. **Multiple thin coats are always better than fewer thick ones.**

The ultimate results will depend upon the severity of the contamination, methods of application, number of coats and environmental conditions affecting the installation. Many times a multiple coat application (3+ coats) will be necessary to solve a significant offgassing problem. There are no hard and fast rules on how many coats will be necessary, as each indoor air quality problem tends to be unique and as such to require individualized handling of the problem. The following chart gives some basic reference points with regard to the effect of various AFM Safecoat products upon formaldehyde offgassing from plywood.

Formaldehyde Offgassing Reduction Analysis Using Safecoat® Products

Sample	Primer Coat	Finish Coat	Formaldehyde Evaporation mg. per liter
A	Uncoated Plywood	Uncoated Plywood	3.2
B	Transitional Primer	0 VOC Semi Gloss	.03
C	0 VOC Semi Gloss	0 VOC Semi Gloss	.04
D	Polyureseal BP Gloss	Polyureseal BP Gloss	.02

Formaldehyde Offgassing reduced 90+% with various Safecoat systems after one week cure. All surfaces oak plywood with urea adhesive. Dimensions: L - 150mm *x* W - 50mm *x* H -5mm

For a visual demonstration of Safecoat Hard Seal blocking chemical emissions, go to http://www.afmsafecoat.com/user_files/File/Reduction Proof.pdf.

Finally, the biggest qualifier to success is personal tolerance to the offending chemistry and the products used to mitigate the pollution. Accordingly, we strongly recommend that all users and applicators, especially those sensitive to chemicals, test products for personal tolerance before using. Test samples of all AFM Safecoat products are available for purchase for this purpose through Safe Building Solutions, 262-968-5070.

Here is a chart of the most common emission sources and AFM product remedies.

PAINT

Best: Repaint with Safecoat Transitional Primer and Safecoat topcoat.
Clear Sealer: Safecoat Hard Seal (note: Hard Seal creates surface sheen.)

CARPETING

SafeChoice Carpet Shampoo/Seal/Lock Out

FLOORING

Wooden - Safecoat Polyureseal BP
Concrete - Safecoat Mexeseal
Vinyl - Safecoat Hard Seal

FURNITURE or CABINETRY

Clear Sealer - Safecoat Hard Seal or Acrylacq
Pigmented - Safecoat Transitional Primer/Paint

SUBFLOORS - OSB, plywood, particle board

Safecoat Safe Seal

EXTERIOR SHEATHING

Safecoat Safe Seal

GROUT

Safecoat Grout Sealer