



## The Facts About Glitsa

### Why Does Mother Nature Love the Smell of Swedish Finish?

By Duane Bartel, President, Glitsa American – Part three of four

In this article I intend to explain why Swedish finishes use “smelly” solvents and why this is advantageous not only for the homeowner and the contractor but also why it is a “friendly” choice for the environment.

It is popular to tout water-base finish as “new technology”, or as many would like to believe, “better technology”. Fifteen years ago, many formulators thought water-base technology would surpass solvent-based finishes in just a few years. In those days, the Gold Standard against which they measured their progress was the well-established record of high performance, solvent-based coatings. Fifteen years later, water-base formulations have made significant headway but the solvent-based technology is still the Gold Standard they aspire to emulate.

According to statistics from FSCT (the Federation of Societies for Coatings Technology), approximately 65% of all industrial coatings produced today are solvent-based. This number would not be so high if water-base coatings were as good as they are frequently promoted. Forecasts of the demise of solvent-based coatings are obviously greatly exaggerated and the superior performance of solvent-based coatings assures they will be alive and kicking for many years to come.

I believe Swedish floor finishes have a long and bright future. Recent actions by the EPA support this optimism. Increasingly, the EPA is recognizing that



coating performance is a vital parameter to consider in conjunction with VOC limits. Recently enacted VOC regulations demonstrate this awareness.

But why do waterbase finishes smell less offensive than Swedish finishes? The high performance resins used in Swedish finishes require using specialized high performance solvents. Many of these are called “aromatic” solvents because of their strong aroma. Unfortunately, these aromas are not wonderful fragrances, but they evaporate quickly, vacating the house at a rapid rate when properly ventilated. To minimize the “smelly” downside of solvent-based

coatings, the contractor must wear a respirator with the proper filters and should aggressively ventilate when the coating has reached the appropriate degree of drying. He or she should also advise the homeowners to stay out of the house until the house has been ventilated sufficiently to remove most of the fumes of the evaporating solvents.

Many people assume that water-base coatings are safer because there is less odor. Plus, they are “based on water” and, after all, water must be much safer than solvent, right? Not necessarily. To begin with, referring to a coating as “water-base” is actually a misnomer. In technical terms, the “base” of a coating is actually the polymer or resin that solidifies on the floor. The generic term “water-base” has come to mean coatings containing some water in the volatiles (stuff that

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evaporates). This is quite misleading and the FSCT is working to have the term water-based dropped. However, considering the extent to which this term has found generic use, it is unlikely they will be successful.

The fact is, water-based coatings contain a lot of ingredients that are on par with the ingredients in solvent-based coatings relative to eco-friendliness and safety. The term water-base may lead some people to assume that this is a more “organic” or natural coating solution and therefore safer and better for the environment. This assumption is flawed. No matter what type of floor coating is used, the contractor should wear a respirator and it is always a good idea to ventilate the house during cure to vacate fumes. Some contractors don’t wear respirators when applying water-base products because the odor may seem acceptable without it. This is not a good or healthy practice.

It is only partially correct that the fundamental operation of water in a water-base finish is to keep the resin in suspension while the coating is applied. It is not as simple as that. The fact is, water is adapted to function like a solvent in a complex interplay of molecules as they transform through the stages from a liquid to an evenly applied, uniform, solid coating of consistent sheen. This is a very tall order because water, without modifiers, is not very efficient performing

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like a solvent. Water is very limited as to what it can dissolve. Water-base coatings are loaded with co-solvents, coalescing agents, surfactants, anti-foaming agents and other chemicals to compensate for water’s deficiencies when acting like a solvent. Water-base coatings also require biocides and anti-freeze ingredients due to their water affiliation. Obviously, water-base coatings can become quite complex and contain a large number of chemical ingredients.

Increasingly, homeowners are considering environmental issues when choosing materials going into their homes. It is important that they have complete information in order to make these choices intelligently. Let’s look at a “big picture” example to put the merits of these two types of floor coatings into perspective, relative to eco-friendliness.

Which of the following scenarios would you guess produces more pollution?

Mrs. Jones calls Fred’s Floors to apply a typical three to four coat water-base coating to her floor. Fred arrives on day one to put down the seal coat. Over the next couple of days he applies the

remaining coats. It is important to note that over the course of this job, Fred’s van has gobbled up a significant number of gallons of gasoline traveling to and from Mrs. Jones house. We will come back to this point. Fred completes the work and happily collects payment. Two years later Mrs. Jones has Fred return to screen and recoat. After two more years Fred is back once more to screen and recoat. He is still driving his trusty, but thirsty van.

Meanwhile, next door, Mrs. Brown notices on day one of this example the Glitsa logo on Fred’s van. Being true to the American tradition of “forget keeping up – lets do better than the Jones’s” she requests a two to three coat Glitsa Gold Seal system premium floor finish on her new floors. As you can tell, Mrs. Brown is a first class kind of gal. She moves out for a couple extra days to allow Fred to do an outstanding job and thoroughly ventilate the house. She comes back to marvel at her beautiful floors. As the years pass and she maintains these beautiful floors, she can’t help but notice how much better her floors are holding up compared to her neighbor’s. And when one day she sees Fred haul his equipment into Mrs. Jones house for the second recoat, she smiles approvingly as she observes that her own floors still have years of life left in them before recoating.

In this moment of satisfaction, Mrs. Brown is probably not thinking about pollution. But if she were, she should realize that the use of a lower-VOC, lower performance product may produce more

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pollution than a higher-VOC, high performance product for one simple reason - the efficiency of performance over time. All the gasoline Fred burned running back and forth to Mrs. Jones house over the years produced an amount of greenhouse gases that far exceeds the environmental impact of the VOCs from the use of any kind of floor finish. Using Swedish floor finish in this comparison saves on pollution by reducing gasoline usage, engine wear, tire wear, road wear, and overall energy consumption. Additionally, every type of wear requires repairs, which inevitably result in additional energy consumption that generates even more greenhouse and VOC emissions in a perpetual cycle. Tracing all the incremental pollution associated with a product's performance over time is referred to as "environmental load" of a product. For these reasons,

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Swedish floor coatings can impose a smaller environmental load than waterbase floor coatings. This should make both Mrs. Brown and the environment very happy. An added benefit is that Mrs. Brown saves money in the long run.

Solvent-based coatings are superior to water-based coatings largely because water ties the hands of the formulator with some serious limitations. There are many high performance resins that simply will not work with water. Water is incapable of dissolving or even mixing with some excellent resin systems. In contrast, the high performance conversion varnish resins used in Swedish floor finishes blend readily with aromatic and other specific solvents resulting in top-quality products.

Performance over time is what truly matters and Glitsa products have demonstrated this for decades. For over forty years, Glitsa's Gold Seal system products have proven this point. There are Glitsa-finished floors in service today that are older than most of our competitors products have been around. The home-owner who specifies the Glitsa Gold Seal system for her floors can count on the following advantages over a waterbase floor coating: Outstanding durability, superior scratch and scuff resistance, excellent mar resistance, high clarity (bringing out the natural character of the wood), good chemical resistance and little tendency to amber. And it won't look like a dull, thick sheet of plastic, blurring the character of the wood like many waterbase finishes do. It is easy to keep Glitsa floors looking good and they keep looking good for a long, long time. ■