Kemiko Decorative
& Industrial Coatings

TECHNICAL BULLETIN
KEMIKO® Dyes

Description
Kemiko Dyes by Bob Harris ,water-based and solvent-based, are offered in a ready-to-use range of colors. In addition to being able to be used independently on a floor, they can also be used on problem areas where acid stain has not reacted or penetrated the surface as well as to accent chemically stained floors or walls. The colors obtained with Kemiko Dyes by Bob Harris broaden the artisan's range of color possibilities that cannot be achieved when using a traditional acid stain. Interesting effects can be achieved when using a multitude of colors on your floor as well as faux finishing techniques. On regular concrete or toppings, it is mandatory to seal the dyed floor to lock the color in and prevent leaching. On polished concrete it is recommended to apply one to two light coats of a protectant such as of DCI Polish Guard to help enhance and preserve the color. Please refer to the technical guideline for DCI Polish Guard for application techniques and coverage
rates.

Physical Characteristics

Coverage	Will vary depending on mix design, surface profile & porosity. Water Based - 300-500 sq.ft. per coat per gallon Hard Troweled or polished concrete - 400-600 sq.ft. per coat per gallon Solvent Based - 300-500 sq.ft. per coat per gallon Hard Troweled or polished concrete - 400-600 sq.ft. per coat per gallon
Temperature Application	Dyes should not be applied to substrates colder than 40°F and a maximum of 90°F

Surface Preparation
It is important that the concrete substrate is clean and free of contaminants such as dry wall spillage, dry wall dust and dirt. Also, any sealers or paint will need to be stripped and cleaned from the surface prior to the dye application since they could act as a resist. If diamond polishing, it is usually best to apply Kemiko Dyes by Bob Harris somewhere between 200 to 400 grit resin bonded diamonds depending on the equipment and diamond being used. Applying the Water-Based dye after a higher grit than 400 diamond has been used could effect the penetration and absorption of water-based dye. Generally, the solvent based dye is best applied at the 400 grit phase of polished concrete however, in some cases the dye can be applied at higher grits such as 800 to 1500. A test sample should be conducted to check compatibility.

Mixing & Application Methods
Mixing –
Water Based Concentrate - Each container of the water-based concentrate is enough to make 1 gallon of water-based dye. To achieve softer or lighter colors, Kemiko water-based dyes can be thinned with clean water. Unless a desired effect is trying to be achieved, you should never dilute the dye more than three parts water to one part dye. On polished concrete, do not dilute water-based dye.
Solvent Based - Kemiko's powdered dyes are available in 2 sizes, and when mixed with the applicable amount of Acetone, can make 1 and 5 gallons of dye. Kemiko Dyes by Bob Harris solvent based dye should not be thinned more than five parts thinner to one part dye unless a certain affect is trying to be achieved. Higher thinning can greatly jeopardize the color intensity. On polished concrete, it is recommended to use the dye un-thinned. If thinning is required for a lighter color, thin at a rate of one part thinner to one part dye

Application -
Surfaces should be clean and dry before the application of Kemiko Dyes (water & Solvent based).
Always mask off surrounding areas so that unwanted dye does not contaminate adjoining areas such as painted walls, masonry walls of adjoining concrete. This is especially important if there is exposed finished wood such as cabinets. Test sampling is key prior to applying dye on the actual project so the installer knows specifically how the substrate is accepting the dye.
Water Based - Water-based dye can be applied on small areas with artist's brushes or traditional chip brushes.
On smooth surfaces, color washed appearances can be achieved simply by ragging dye on the surface in a random motion. On small borders, the use of a tile sponge can be used. On open areas, the use of a pump-up type sprayer combined with one additional person massaging the dye into the surface with a micro fiber applicator or a rayon mop is an effective way of applying the dye. Try and maintain a wet edge when working large areas. On excessively wide areas, use contraction, isolation or construction joints as starting and stopping points. Try not to puddle the material during the application. Site conditions such as air movement, humidity and temperature can all factor in to how the floor will accept dye. Different profiles such as polished, hard troweled, sand blasted or floated will greatly influence the final

color of dye. Layering color upon color is a great way to achieve additional variation.
Solvent Based - Solvent-based dyes are best applied using pump up sprayers or high volume low-pressure sprayers. Although on small areas such as borders and small saw cut design areas solvent-based dyes can be brush applied, it is best applied with a sprayer. If brushing, you must work quickly or brush strokes will appear because of the accelerated drying time. When spraying, use a professional chemical resistant sprayer with a conical tip (cone) for spraying since a fan tip is more likely to produce spray lines. Have an empty bucket close by so that when you need to stop the spray pattern you can put the spray tip into the bucket, which will help prevent splatters. Since solvents can affect the life of the sprayer and its components, immediately after spraying, flush the sprayer with clean water running it through the wand to extend the life of the sprayer.

Cleaning & Sealing Methods
Cleaning –
Water Based - If water-based dye is applied in the proper manner, minimal clean up is necessary. If puddled or over applied, a residual residue could be left behind that could affect the adhesion of a sealer. Only if necessary, lightly damp mop the surface with a rung out damp mop. Excessive water could cause the dye to reactivate and bleed. Dusty footprints or dust can simply be lightly sponged off.
Solvent Based - If solvent-based dye was applied in the proper manner, minimal clean up is necessary. Because of the accelerated drying times when using solvent based dyes, sealing can usually commence with in one hour after application of dye.

Sealing –
It is imperative the first coat of sealer be spray applied with an airless sprayer or pressurized pump sprayer. The first coat of sealer is considered a prime coat, which helps lock in the dye. Just brushing or rolling on the first coat could cause the dyes to bleed. Both water-based and solvent-based sealers are compatible with Kemiko Dyes by Bob Harris. For best results when sealing, follow the manufacturers recommendations on application methods and coverage rates. When using acrylic sealers, multiple thin coats are better than one thick coat. High performance coatings can be used over Kemiko Dyes by Bob Harris however, consider locking the dye in with a first coat of Water-Based or 100% solids epoxy. Applying your first coat with a solvent-based urethane could cause the dyes to bleed. It is recommended that acrylic sealers be maintained with a mop-on floor wax such as Easy Shine.

Health & Safety Cautions:
Water-Based: May be irritating to the eyes and skin. May be harmful if inhaled, absorbed through the skin, or swallowed. During application process use protective eye wear, proper respirator and protective gloves.
Solvent-Based: Contents are flammable. Vapors may cause flash fires. Keep away from heat, sparks and open flames. Keep work area well-ventilated, turn off all pilot lights, flames, heaters, stoves, and any other sources of ignition. During application process use protective eye wear, proper respirator and protective gloves

Safety -
Solvent-based dyes are highly flammable. Great care should be taken when using this product! Protective gear such as approved respirator, safety glasses, protective gloves, etc. Solvent-based dyes will produce vapors that are highly flammable. Make sure rooms are well ventilated. Open windows and use fans to achieve air movement. Make absolutely certain no source of open flame is present. Pilot lights, heaters, cigarettes, and electric tools should not be used or turned off until any and all fumes do not exist.

Service is part of our formula

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