

Using TransTint® Liquid Dyes

TransTints represent an innovation in dye technology. These dyes are pre-dissolved in a glycol ether solvent which allows great latitude in using the dyes. This eliminates the waiting for dyes to dissolve, straining as well as solvent guesswork.

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Product Description

TransTint dyes are a single component concentrated metallized acid dyestuff dissolved in a glycol ether carrier. The product is designed to be let down with a polar or mildly polar solvent such as water or alcohol and used as a dye stain on bare wood for interior surfaces. It is not suitable for exterior use. It can also be added directly to clear finishing materials to make toners. TransTint is not a finish and **must** be top-coated with a clear finish. TransTint dyes are suitable for furniture and architectural applications but are not recommended for toys or food preparation surfaces.

Advantages

TransTints are formulated from light stable metallized acid dyes. They are more lightfast when compared to conventional "aniline" powdered type dye stains. TransTint dyes concentrated formulation allows the user great latitude in using the dye because glycol ethers are compatible with a wide variety of finishing products. The dye can be mixed with either water or alcohol as a bare stain on wood - or added directly to finishing materials like shellac and lacquer to make toners or stains.

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As a Stain For Bare Wood (4 Options)

- 1. Mix with Water: The ratio of 1 ounce dye to 1 quart of water is a starting point, and you can increase or decrease solvent to suit your need.
- 2. Mix with Alcohol: As with water, the ratio of 1 ounce dye to 1 quart of alcohol is a starting point, and you can increase or decrease solvent to suit your need.
- 3. Mix with Water & Alcohol: A 50/50 mix of water and alcohol is a very satisfactory solvent for applying TransTints. It raises the grain less than straight water and dries quicker. Do not use this mix by hand if the wood is prone to splotching. Instead, consider spraying the project

- with this mixture.
- 4. Mix with Lacquer Thinner: Lacquer thinner can be used if first mixed 50/50 with denatured alcohol.

When staining any wood, pre-test to see if wood will accept stain evenly. Always test on a sample for satisfactory results. See "Controlling Uneven Staining" below for uneven staining control. TransTint can also be added to water based stains to adjust color.

As a Toner – TransTint dyes can be added to any water or solvent based finish including, shellac, water-based products, solvent lacquers, polyester, and two component lacquers and varnishes. It cannot be added to two-component polyurethanes. Always test before using. Finishes thinned with a high amount of mineral spirits may not accept the dye. Use only gloss finish, unsatisfactory results may be experienced with satin, semi-gloss and flat finishes. The ratio of concentrate to finish is variable, but best results are with 1/4 - 1/2 ounce concentrate per quart. To add TransTints to solvent based finishes like shellac and lacquers, simply add the required amount (start with about 1/4 to 1/2 oz. per quart) and stir the dye until the finish appears homogenous and clear on the end of a stick. To add to water based finishes, stir the desired amount into the finish (adding 5-10% water to the finish helps disperse the dye), then stir gently for 30 seconds. Let the dye/finish sit for at least 30 minutes before using. Failure to do this may result in "shocking" the emulsion. In some cases the water base finish may turn stringy or gel slightly. This indicates an incompatibility and you should switch to another finish.

Applying TransTint Dyes

When applying dyes by hand, slightly different techniques should be used depending on the carrier for the dye.

Applying Water-reduced TransTints --These should be simply mixed in water and are ready for use immediately. We recommend distilled water only if using a very dilute dye - otherwise small, gray dots may appear on the surface of some woods like oak and cherry. The solution does not need to be strained. Since water raises the grain, a pre-grain raising may minimize objectionable grain raise on very open grained woods like oak. Use distilled water and sponge the wood liberally. After drying, sand with the last grit in your sanding schedule. Flood the surface with dye from a rag, brush or sponge, and work it quickly to cover the surface. Get the entire surface wet with dye until it's uniformly saturated. On chairs and other complex items try to work on a manageable area. On frame and panel doors or other complex surfaces, use a small brush or a "used" synthetic steel wool pad to work the dye into crevices and corners. A plant mister used to apply water dyes works quite well. On floors and other large surfaces, propylene glycol can be added to the mixed dye to increase the open time.

Spraying water dyes is an easy way to get them on large items. You may choose not to wipe the dye if working with splotch prone woods. Or just spray the item liberally with the dye and then wipe afterwards to blot up dye.

The color of the wood when wet with dye is not necessarily the color when it's finished. To get a good idea of whether or not the intensity and shade is correct, let the dye completely dry, and then wipe it with mineral spirits or naphtha. However, dyes shift in shade depending on the finish applied, so the only way to be truly accurate is to practice on some samples and finish them with several coats of the finish you'll be using. To make a dye stronger add more dye to the solution. To make a dye weaker, add more water. To lighten up a surface that's already dyed, apply clean water with a clean rag before you apply a finish. You can remove quite a bit of color but never all of it. On wood with very pronounced pores like oak and ash, you may notice that the pores do not accept dye and remain light. This is a surface tension phenomenon related to the inherently high surface tension of water.

There are a couple of options in dealing with this.

- Apply a pigmented stain over the dye
- Use a paste wood filler to fill and color the pores
- Seal the wood, then use a colored glaze or stain to color the wood

Water dyes can be coated when the wood feels dry to the touch. This can be several hours or 8 hours depending upon weather. If the wood has raised fibers, a light rubbing with maroon steel wool is best, as sandpaper may cut through the sharp edges.

You may experience bleeding with water dyes and some water-base finishes. Bleeding shows up as color in the sanding residue when you sand the finish and create a "muddy" appearance. This can be eliminated by sealing the dye in with solvent dewaxed shellac. A very easy alternative is to add 10% by volume of any water based finish to the TransTint solution to act as a binder.

Applying Solvent Reduced (non-water) TransTints -- Alcohol reduced TransTint dyes are dissolved in either methanol, ethanol (denatured alcohol), or 99% Isopropanol. <u>A 50/50 mix of denatured alcohol/lacquer thinner makes a very good NGR (non-grain-raising) stain.</u>

When applying solvent or alcohol dyes by brush or rag, the choice of solvent is critical. Straight alcohol evaporates very quickly causing lap marks. On porous and figured woods, you may experience bleeding of still wet dye back up and around the pore, making a dark circle. When this happens we suggest that you add a retarder to the alcohol. This slows down the overall drying making the dye easier to apply and eliminates bleeding. Alcohol dye retarder (Behlen Solar Lux retarder is one example) is available from most suppliers. Lacquer retarder also works. Many companies sell a pre-mixed blend of alcohol and glycol ether (Behlen Solar-Lux) which will work fine.

Alcohol dye is best applied with a rag. You can use a brush, but this is only effective on small to mid-sized items. A brush is too hard to control on large surfaces like table-tops so you may find it better to apply the dye with a solvent dampened rag and work quickly to cover the surface. Rather than flooding the dye on, it's easier to control the dye distribution by using less dye. Dab the rag in a shallow pan filled with dye and start wiping it on with the grain of the wood. If you can work quickly enough and apply the dye evenly, you can apply the dye on in any direction, but until you get the hang of this technique, work with the grain. It's better to work with less dye -- using it almost "dry" and then build to the color intensity you want by applying more dye gradually. If you see a drip, try to fix it right away. Because the dye evaporates quickly, drip marks and other mistakes can be hard to blend in later on when the dye is dry.

You can lighten the color by applying dye solvent with a rag. You can darken the color by applying more dye but only up to a certain point.

Spraying alcohol dyes is fast and produces a uniform color. It is trickier to do because it's hard to get the dye into corners (the vortex created by the compressed air doesn't allow material to get into the corners). We recommend wet brushing the corners first and then immediately coming in with the gun. You can wipe the dye or leave it alone after spraying, but wiping will push the dye into the fibers better, resulting in more depth. Using a retarder is up to you. A practical alternative is to cut way back on the air pressure to reduce the spray vortex. We recommend the addition of 10% by volume of a 2 lb. cut dewaxed shellac or compatible lacquer when spraying the dye. This allows you to visualize the build of the color and also prevents bleeding when applying topcoats, particularly water base finishes.

Alcohol dyes are usually dry enough to finish after several hours. They may be pulled up by some finishes that contain alcohol or alcohol type solvents (like glycol ethers) so a light touch is recommended with thin coats if using these finishes (particularly shellac and water base finishes). The use of the binders described above (shellac or lacquer) is also helpful in this situation.

Inter-Mixing TransTint Dyes

TransTints are intermixable with all other dyes in the TransTint line. They also mix with TransFast ® powdered dyes.

Adding TransTint to Other Products

TransTint Dyes can be added to a wide variety of finishing products like waxes and glues. The following list illustrates the unique uses for this product.

- Add to waxes to make a one step colored wax/stain for use on decorative objects and turnings
- Add to water miscible glues like yellow and white to disguise glue lines
- Add to veneer glues to make squeeze-out blend in on figured woods like crotch mahogany
- Add to epoxy to make clear colored fillers for filling knots and cracks
- Mix with shellac or water base finish for touch-ups on damaged finishes (scratches and dents)
- TransTints are not recommended for adding to oil based finishes like stains, varnishes, polyurethanes, linseed and Tung oil. You can usually work around having to add TransTint to oils by using TransTints in shellac or some other medium that it does mix with. If you have a situation where you must add TransTints to any oil or oil product that thins with mineral spirits, contact us for an additive that will disperse the dye into oil finishes.

Controlling Uneven Staining

When uneven staining happens it's a condition known as splotching. This can happen with any wood, but is most prevalent with all softwoods (pines, firs, etc.) and in the hardwoods; cherry, poplar, maple, aspen, alder and birch. If uneven staining occurs there are several remedies.

- Spray the stain and do not wipe it.
- Apply a washcoat. A washcoat is a thinned finish that will partially seal the wood but still allow the stain to penetrate.

	Shellac	Lacquer	Water base
Solvent	1/2 - 1 pound cut shellac	Sanding sealer or vinyl sealer thinned 2:1 thinner/finish	Water based thinned 2:1 water/finish or premixed stain controller or clear base
Lacquer thinner/alcohol			
Water	X		X
Water/alcohol	X	X	Χ

Apply the washcoat and let it dry completely. Apply it by hand or spray. Sand the washcoat with 320-400 grit sandpaper, remove the dust, and then apply your stain. This procedure requires experimentation and not all wood species react the same way.

Storing Dyes

Unmixed liquid concentrates have no shelf life. It is recommended to keep the unmixed product in a cool, dry place and keep the top on tightly and capped. Some colors may change over time once they are mixed so it's always best to mix up what you will be using right away. If you use dye that

has been mixed up and stored for over several months, **always** check the color first before you apply it to your project. Store the mixed dye in a clean plastic or glass container. The colors listed below will gel (thicken) after several months once mixed with water and may not be usable:

TransTint Bright Red #6021
TransTint Blue #6022

Known Incompatibilties

TransTints are incompatible* when **added** to the following products:

- Oil based varnishes and polyurethanes
- Watco Danish Oil, Minwax Wipe on Poly, Minwax Antique Oil, and similar wipe on oil finishes (excluding gels)
- All oil based liquid stains (excluding oil based gel stains)
- Mineral Spirits
- Tung oil and Linseed oil
- 2K (2-component) polyurethane finishes

MSDS for all TransTint Colors are available at: www.homesteadfinishing.com/htdocs/msds.htm

Other Uses for Dyes

Dyes can be used for solving many finishing problems. Three of the most common ones are blending sapwood into heartwood color, kicking out figure in figured woods like curly maple and cherry, and warming cool woods like poplar and kiln-dried walnut.

Blending sapwood into heartwood can be done with water dyes, but I prefer to use alcohol-soluble dyes or TransTints mixed with a dilute shellac because they dry much quicker and do not raise the grain. First, sand to the desired grit and wipe the wood with mineral spirits. This approximates the color of the heartwood when finished. Pick a dye that matches the lightest background color of the heartwood. Using a small spray gun is best, as you can "build" up the intensity of the color gradually. If you can't spray pour some of the mixed dye in a small shallow can like a tuna can. Wrap some clean cotton cloth around your finger and dab it into the stain. Wipe the stain on in long quick strokes on the sapwood. If the color is too dark, stop and wipe the stain immediately with alcohol to lighten it. Wipe some more mineral spirits over the board to see if you got close enough, but chances are the color will still be off. Keep wiping dilute dye on the sapwood, adding red, yellow or green to adjust the color if necessary. Build the color in layers until you match the heartwood. Remember, a perfect match at this point isn't necessary. As you build up finish, the two areas will blend together. If the distinction is still off as you apply clear topcoats, then correct the color with glazing or more applications of dilute dye mixed with shellac. If you're staining the darker heartwood, wait several hours before applying a stain so that the dye has enough time to dry.

Adding "Kick" To Figured Lumber And Veneer

Figured woods sometimes need a little "kick" to really bring out figure, surface shimmer, and luster. Using extremely dilute solutions of an amber-brown dye will enhance figured areas like curl, bird's-eye



^{*} You can always apply TransTint to the wood, let dry, and then apply these products.

and swirl area around knots. Dilute means approximately 8 times the normal solution, although you'll need to experiment.



Cool woods like poplar and kiln-dried maple can be warmed up by applying a dilute amber colored (like TransTint® Honey Amber) dye. Applied in a dilute strength, this color warms up poplar and walnut.

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