



Gamblin Conservation Colors Technical Data Sheet

August 2017

Color Notes:

All colors made from the finest lightfast pigments. No additives are used.

- Consult color chart for opacity and transparency information.
- Lightfast alternatives formulated for Indian Yellow, Alizarin Crimson, and Brown Madder Alizarin.
- Extender White is made from calcium carbonate (PW18). Use this to increase transparency, or translucency of a color without changing its viscosity.
- Black Spinel is made from a high temperature fusing of copper and chrome. Its tint is the most neutral of all black pigments.
- The conservation color palette includes modern organic colors: Indian Yellow, Hansa Yellow Medium, Manganese Blue Hue, Dioxazine Purple, Quinacridone Red, Phthalo Blue, Phthalo Green. Modern organics can be used to boost the chroma of a color mixture. Most of these colors are highly transparent. Alumina hydrate is added to the modern organic colors to adjust tinting strength.
- The Transparent Earth Colors are made from hydrated synthetic iron oxides. These pigments are more transparent than natural earths.

Binder Notes:

Laropal A-81 is a synthetic low molecular weight resin, a urea-aldehyde resin. Its special characteristics are:

- photochemical stability
- excellent pigment wetting
- working properties similar to a natural resin medium.

After aging for 3000 hrs in a weatherometer at the NGA Washington D.C., solubility of the resin changed only slightly. The resin is soluble in solvents of low polarity both during working and when it is aged.

Managing the Solvent in the Color Jars:

There is no perfect container for solvent borne color systems. Tubes and jars lose solvent during working sessions and in storage. Gamblin Conservation Colors are packaged in glass jars to allow a conservator to manage the solvent loss or to revive paint that has hardened.

- Assume that each jar of Gamblin Conservation Color will slowly lose solvent.
- Add drops of solvent periodically to the color jars to replace what has been lost.
- If the paint skins over from solvent loss, add two or three drops of strong mineral spirits into the jar, let sit for an hour or two then mix to re-wet the dried paint.
- If the whole jar has dried, add solvent and mix until the paint has re-wetted thoroughly.

Note: Some conservators store solvent borne paints in air tight containers to slow the evaporation rate.

The solvent strength required for Gamblin Conservation Colors is lower than most other media used for retouching.

A few suggestions from conservators of solvents to use with Gamblin Conservation Colors:

- Isopropanol (99% pure) CAS # 67-63-0
- “Everclear” or “Gemclear” or other 95% grain Alcohol CAS # 64-17-5

Suggestions from European Conservators:

- Methoxypropanol (Dowanol PM)CAS # 1320-67-8
- Ethyl Lactate
- Mixture of Ethyl Lactate and Isopropanol
- Diacetone alcohol CAS #123-42-2
- (2:3) Mixture of Ethanol to diacetone alcohol
- 40% ethyl lactate, 30% ligroin, 30% ethanol

Suggested Solvents From BASF, the maker of Laropal A-81:

- Methoxypropyl acetate, (PM Acetate, or Glycol Ether PM Acetate)... CAS # 108-65-6
- Mineral Spirits of 40% aromatics

Gamblin Conservation Colors dry fairly matte.

- To keep the gloss level low, dilute the colors with small amounts of solvent only.
- To increase gloss, dilute the colors with Galdehyde Resin medium, the binder for the colors.

Formula for making dry Laropal A-81 into a painting medium for our colors:

- For every 10 Gms of dry Laropal A-81 add 13 grams of your chosen solvent. (If using mineral spirits use about 40% aromatics.) This will make a medium of the same strength as the binder for the colors.

Final Picture Varnishes:

Any varnish, utilizing the proper technique, can be applied over Gamblin Conservation Colors.

- Paraloid B-72 or other varnishes that are mixed in 100% aromatic solvents (or any combination above 15%) may disrupt the retouching if it is vigorously brush applied. Such varnishes may be spray applied.
- Regalrez 1094 or MS2A (varnish resins that can be dissolved in aliphatic solvents) may be brush applied over the Gamblin Conservation Colors.

Note: We strongly recommend testing varnishes and application techniques over the new retouching paints on a mock up before using them in a complete treatment.

An excellent resource on varnishes and varnishing that goes into detail on all the traditional and the new varnishes is: *Painting Conservation Catalog, Volume 1, Varnishes and Surface Coatings*, published in 1998. It is available from AIC 01-202-452-9545.

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