

## 8002550 - 8084550 GAMBLIN Conservation Colors

Gamblin Conservation Colors are made from Laropal A-81, Mineral spirits, and lightfast pigments. Alumina hydrate is added to the modern organic colors to adjust tinting strength. No additives are used.

- All pigments are of the highest purity and lightfastness available.
- Opacity and transparency information is provided for all hues.
- Lightfast alternatives formulated for Indian Yellow (8035050), and Brown Madder Alizarin (8005050).
- Extender White (8084550) is made from calcium carbonate (PW 18). Use this to increase transparency, or translucency of a color without changing its viscosity.
- Black Spinel (8004550) is made from a high temperature fusing of copper and chrome. Its tint is the most neutral of all black pigments.

The Palette includes modern organic colors: Indian Yellow, Hansa Yellow Medium, Manganese Blue Hue, Dioxazine Purple, Quinacridone Red, Phthalo Blue, Phthalo Green.

Suggested use: when high chroma in a mixture is need. Most of the colors are highly transparent.

The Transparent Earth Colors are made from hydrated synthetic iron oxides.

Suggested use: on old master paintings made with natural earth colors more transparent that those available today.

### **Binder Notes:**

Laropal A-81 is a synthetic low molecular weight, ultra-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, 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 the solvent borne color systems. Tubes and jars lose solvent during working sessions and in storage. Gamblin Conservation Colors are packaged to allow a conservator to manage the solvent loss or to revive paint that has hardened.

- Assume that each jar of Gamblin Conservation Colors 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 mineral spirits or isopropanol into jars, let set 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 pigment 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.

Solvents for in-painting with Gamblin Conservation Colors:

- When wet from the jar, dilute with aliphatic hydrocarbon solvents (mineral spirits).
- If paints dry on the pallet, they require only a 25 % aromatic mineral spirits to re-wet them.

By using two petroleum distillate solvents of similar evaporation rates (one of 100 % aromatics and the other an aliphatic solvent), conservators can mix a range of solvents with specific evaporation rates and strength.

For crisp brush strokes, use a faster evaporating solvent.

For more working time use a solvent with a slower evaporation rate.

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

(1:1:1) mixture of petroleum benzene, Shell TS-28, and isopropanol.

(1:4) mixture of isopropanol in mineral spirits (15 % aromatic)

Isopropanol

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 dry Laropal A-8

- Use the resin jar as your mixing container. The resin weighs 65 g.
- Add 75 g of a petroleum distillate solvent of approximately 40 % aromatics (this is stronger than the strength of the solvent need for in-painting because this resin solution is high in solids and it takes a stronger solvent to dissolve that much resin into a stable resin solution).
- Or, to make a petroleum distillate of 40 % aromatics, add 32 grams of a 100 % aromatics petroleum distillate of the jar, then add 42 grams of a low or no aromatic petroleum distillate. 75 g total.
- Shake the jar periodically to help the crystals dissolve. The resin solution will be complete when all of the crystals have dissolved.













**Final Picture Varnishes:**



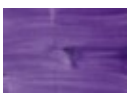



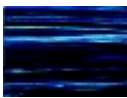

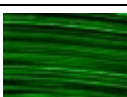
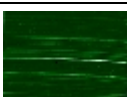


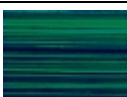
Any varnish, utilizing the proper technique, can be applied over Gamblin Conservation Colors.

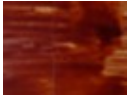





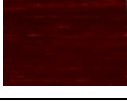




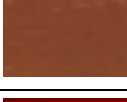

- Paraloid B-72 or other varnishes that are mixed in 100 % aromatic solvents (or any combination above 15 %) may disrupt the retouching if it is vigorously brush applied. Such varnishes may be spray applied.
- Regalrez 1094 or MS2A (varnish resin that can be dissolved in aliphatic solvents) may be brush 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 traditional paints is: [Painting Conservation Catalog, Volume 1, Varnishes and Surface Coating](#), published in 1998.



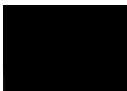

| No             | Price-group |   | Name  |
|----------------|-------------|---|---|
| <b>YELLOWS</b> |             |   |   |
| 8017050        | 4           |    | <b>Cadmium Yellow Light</b><br>Concentrated cadmium zinc sulfide (PY 35), opaque  |
| 8018050        | 5           |    | <b>Cadmium Yellow Medium</b><br>Concentrated cadmium sulfide (PY 37), opaque      |
| 8031050        | 3           |    | <b>Hansa Yellow Medium</b><br>Arylide yellow (PY 74), semi-transparent            |
| 8035050        | 2           |    | <b>Indian Yellow Permanent</b><br>Diarylide yellow HR70 (PY 83), transparent      |
| 8044050        | 3           |   | <b>Naples Yellow Light</b><br>Nickel Antimony Titanium Yellow (PY 53), opaque     |
| 8044550        | 3           |  | <b>Naples Yellow Deep</b><br>Chrome Antimony Titanium Buff (PBr 24), opaque       |
| <b>ORANGE</b>  |             |   |   |
| 8012050        | 4           |  | <b>Cadmium Orange</b><br>Concentrated cadmium sulfo-selenide (PO 20), opaque      |
| <b>REDS</b>    |             |   |   |
| 8014050        | 5           |  | <b>Cadmium Red Light</b><br>Concentrated cadmium sulfo-selenide (PR 108), opaque  |
| 8015050        | 5           |  | <b>Cadmium Red Medium</b><br>Concentrated cadmium sulfo-selenide (PR 108), opaque |
| 8002550        | 3           |  | <b>Alizarin Crimson Permanent</b><br>Anthraquinone Red (PR 177), transparent      |
| 8027050        | 3           |  | <b>Dragon's Blood</b><br>Perylene Red (PR 149), transparent                       |
| 8059050        | 3           |  | <b>Quinacridone Red</b><br>Quinacridone red b (PV 19), transparent                |

| <b>VIOLETS</b> |   |   |  |
|----------------|---|---|--|
| <b>8024050</b> | 5 |    | <b>Cobalt Violet</b><br>Cobalt phosphate (PV 14), semi-transparent   |
| <b>8026050</b> | 2 |    | <b>Dioxazine Purple</b><br>Carbazol dioxazine (PV 23), transparent   |
| <b>8071050</b> | 2 |    | <b>Ultramarine Violet</b><br>Complex silicate of sodium & aluminum with sulfur (PV 15), transparent                          |
| <b>BLUES</b>   |   |   |  |
| <b>8070050</b> | 2 |    | <b>Ultramarine Blue</b><br>Complex silicate of sodium & aluminum with sulfur (PB 29), transparent                            |
| <b>8022050</b> | 5 |   | <b>Cobalt Blue</b><br>Oxides of cobalt & aluminum (PB 28), semi-transparent  |
| <b>8040050</b> | 4 |  | <b>Manganese Blue Hue</b><br>Copper phthalocyanine (PB 154), transparent   |
| <b>8056050</b> | 2 |  | <b>Prussian Blue</b><br>Ferri-ammonium ferrocyanide (PB 271), semi-transparent   |
| <b>8053050</b> | 2 |  | <b>Phthalo Blue</b><br>Copper phthalocyanine (PB 152), transparent   |
| <b>GREENS</b>  |   |   |  |
| <b>8074050</b> | 4 |  | <b>Viridian</b><br>Hydrated chromium oxide (PG 18), transparent  |
| <b>8023050</b> | 4 |  | <b>Cobalt Green</b><br>Oxides of cobalt & zinc (PG 19), semi-transparent   |
| <b>8021550</b> | 2 |  | <b>Chromium Oxide Green</b><br>Chromium oxide green (PG 17), opaque  |
| <b>8045050</b> | 3 |  | <b>Permanent Green Light</b><br>Chlorinated copper phthalocyanine (PG 7),<br>Diarylide yellow HR70 (PY 83), semi-transparent |
| <b>8054050</b> | 2 |  | <b>Phthalo Green</b><br>Chlorinated copper phthalocyanine (PG 7), transparent  |

| <b>TRANSPARENT EARTHS</b> |   |   |  |
|---------------------------|---|---|--|
| <b>8068050</b>            | 3 |    | <b>Transparent Earth Brown</b><br>Transparent Mars Red (PR 101), transparent   |
| <b>8068350</b>            | 3 |    | <b>Transparent Earth Yellow</b><br>Transparent Mars Yellow (PY 42), transparent  |
| <b>8068150</b>            | 3 |    | <b>Transparent Earth Orange</b><br>Transparent Mars Yellow, Transparent Mars Red (PY 42, PR 101), transparent  |
| <b>8068250</b>            | 3 |    | <b>Transparent Earth Red</b><br>Transparent Mars Red (PR 101), transparent   |
| <b>EARTHS</b>             |   |   |  |
| <b>8028050</b>            | 2 |   | <b>Greenish Umber</b><br>Natural iron oxide containing manganese (PBr 7), Hydrated chromium oxide (PG 18), semi-transparent  |
| <b>8061050</b>            | 1 |  | <b>Raw Sienna</b><br>Natural iron oxide (PBr 7), semi-transparent  |
| <b>8006050</b>            | 1 |  | <b>Burnt Sienna</b><br>Calcine natural iron oxide (PBr 7), semi-transparent  |
| <b>8062050</b>            | 1 |  | <b>Raw Umber</b><br>Natural iron oxide containing manganese (PBr 7), semi-transparent  |
| <b>8008050</b>            | 1 |  | <b>Burnt Umber</b><br>Calcined natural iron oxide containing manganese (PBr 7), semi-transparent   |
| <b>8005050</b>            | 2 |  | <b>Brown Madder Alizarin Permanent</b><br>Calcined natural iron oxide containing manganese Quinacridone red b, perylene red, ultramarine blue (PBr 7, PV 9, PR 149, PB 29), semi-transparent |
| <b>8033050</b>            | 1 |  | <b>Indian Red</b><br>Synthetic red iron oxide (PR 101), opaque   |
| <b>8043250</b>            | 1 |  | <b>Mars Orange</b><br>Synthetic red iron oxide (PR 101), opaque  |
| <b>8073050</b>            | 1 |  | <b>Venetian Red</b><br>Synthetic red iron oxide (PR 101), opaque   |



## PIGMENTE

|                            |   |   |  |
|----------------------------|---|---|--|
| 8078050                    | 1 |  | <b>Yellow Ochre</b><br>Natural hydrated iron oxide (PY 43), semi-transparent |
| <b>BLACKS &amp; WHITES</b> |   |   |  |
| 8036050                    | 1 |  | <b>Ivory Black</b><br>Bone black (PBk 9), semi-transparent                   |
| 8037050                    | 1 |  | <b>Lamp Black</b><br>Carbon black (PBk 7), semi-transparent                  |
| 8004550                    | 4 |  | <b>Black Spinel</b><br>Copper chromite black spinel (PBk 28), opaque         |
| 8081050                    | 1 |   | <b>Titanium White</b><br>Titanium dioxide (PW 6), opaque                     |
| 8054550                    | 1 |   | <b>Extender White</b><br>Calcium carbonate (PW 18), transparent              |
|                            |   |   |  |
| 8010010                    | 1 |   | <b>Aldehyde Resin, dry, 65 g</b>   |
| 8010015                    | 1 |   | <b>Galdehyde Resin Solution, 100 ml or 1 l</b>                               |
| 8010055                    | 1 |   | <b>Regal Rez, dry, 65 g</b>  |

Gamblin Conservation Colors Colors in 0.5 oz are approx. 14,17 g