



Old Holland Raw Materials

GR 76 DAMMAR RESIN

- A natural resin tapped from trees in Sumatran
- Only the largest possible pieces that are the lightest in colour are suitable.
- Completely soluble in white spirit and turpentine
- Is used as coating and retouching varnish.

HOW TO MAKE

- Fill a gauze bag with resin and hang it in a broad-necked bottle containing turpentine.
- The resin should hang 2-3 cm deep in the turpentine and slowly dissolve (do not pulverise the resin otherwise lumps will form).
- Shaking the bottle every now and then helps to speed up the dissolving process.
- Prevent heating as it results in impurities. Impurities can be filtered out using a nylon stocking (smaller ones with a coffee filter).

RATIOS

- Dammar varnish = 1 part by weight resin: 3 to 4 parts by weight turpentine
- Dammar retouching varnish = diluted mastic varnish = 1 part by weight resin: 4 to 5 parts by weight turpentine

GR 77 MASTIC RESIN

- A natural resin originating from pistacia lentiscus trees
- The best and purest types are taxed directly from the tree.
- Is slightly harder than dammar and is soluble in turpentine and alcohol.
- Is used as coating and retouching varnish.

HOW TO MAKE

- see DAMMAR RESIN

GR 78 COPAL RESIN

- Copal resin is a fossil resin.
- The hardest natural resin in the world.
- Only soluble in fatty oils, such as linseed oil.
- After drying, this resin-oil bond is insensitive to turpentine (unlike dammar and mastic)

HOW TO MAKE

- General comments regarding the production of copal solutions.
- Heat the resin in a kettle at a temperature of approx. 300°C
- The resin will lose around 30% of its weight and the solution will become darker.
- As soon as the resin can take in the oil (can only be established by regular testing), add boiling oil to the solution until it becomes clear. After cooling, dilute with white spirit, turpentine or terebinte. The varnish is now ready.

GR 79 BALSAM RESIN

- Residue remaining after distillation of the volatile oil from the oleoresin obtained from various species of pinus.
- Translucent, pale yellow, irregularly-shaped, glassy species of different sizes.
- Dissolves in many organic solutions and vegetable and mineral oils as well (not in water).
- Removable with white spirit and turpentine.

HOW TO MAKE

- see DAMMAR RESIN

GR 80 CYCLOHEXANONE RESIN

- A crystal clear artificial resin made of cyclohexanone, which has excellent lightfastness.
- After drying, the resin film is elastic and has good bonding properties.
- It is soluble in methanol, ethanol and other common solvents.
- It becomes soft at a temperature between 75° and 90° C.
- Offers (contrary to natural resins) a constant quality and contains no impurities.
- Removable with white spirit and turpentine

HOW TO MAKE

- See DAMMAR RESIN.

GR 81 BLEACHED BEESWAX

- Young working-bees secrete the wax that is used for building the honeycomb.
- This wax is then bleached and thoroughly washed.
- A solution of beeswax in turpentine can be used as coating varnish for oil and tempera paints.
- Beeswax is also used in encaustic painting.

GR 82 SHELLAC PALE

- The only resin type of animal (not plant) origin; secreted by the lac beetle (*coccus lacca*).
- Available in dark and bleached form.
- Only soluble in alcohol.
- The resin film is hard elastic, waterproof and very durable.
- Is used for polish, metal varnish, etc.
- Is also used to reduce the absorption of gesso panels, as pastel fixative and an isolating layer in tempera painting.

GR 83 SHELLAC DEEP

- The only resin type of animal (not plant) origin; secreted by the lac beetle (*coccus lacca*).
- Available in dark and bleached form.
- Only soluble in alcohol.
- The resin film is hard elastic, waterproof and very durable.
- Is used for polish, metal varnish, etc.
- Is also used to reduce the absorption of gesso panels, as pastel fixative and an isolating layer in tempera painting.

GR 84 GUM ARABIC

- This pale to yellow-brown crackle-finish brittle Arabic gum is secreted by an African acacia tree.
- Arabic gum is generally used as a protective colloid in aquarelle paint

HOW TO MAKE

- Allow the gum to expand in water then dissolve at a moderate temperature in ratio of 30% to 40%. Filter through a cloth to remove contaminants.

GR 85 HIDE GLUE

- A glue originating from animal hides (based on the protein colloid glues, collagen, which are present in animal connective tissue).
- Hide glue is the traditional sizing material for fabric support on panels.

HOW TO MAKE

- (use clean tools as animal glue is sensitive to bacteria).
- Pre-soak the dry glue in a little bit of water until it is dry enough to process.
- In the ratio: Dry glue : water = 35 to 75 gram dry glue : 1 litre water (depending on the desired application; e.g., a thin canvas gluing (35 gram) or a strong glue layer on a panel (75 gram)).
- Once a smooth jelly has formed, heat the bain-marie to a max. temperature of 65°C. Do not make more than the immediately required amount of glue, as repeated heating reduces the glue strength.