

GOMA LACA

Resin

PRODUCT DESCRIPTION

Goma Laca is a natural thermoplastic resin derived from the *Araucaria Angustifolia* tree (also known as the Paraná Pine) by the alcoholic extraction of its special resinous parts. This is a reddish-brown product and is presented in flakes.

SPECIFICATIONS

| | |
|-------------------------------------|----------------|
| Acid Index, ASTM D-465 (mg KOH/g) | 2 – 8 |
| Softening Point, ASTM E-28 (B&R °C) | 80 – 110 |
| Volatiles, ASTM D-1259 (%) | Less than 4.0% |
| pH in ethanol solution, ASTM E-70 | 3.0 – 6.5 |

APPLICATIONS

The necessary dosage of Goma Laca to obtain excellent results will vary depending on the application. We encourage our clients to have their own tests done to determine the suitability of each product for their purposes. Also, we suggest that trial mixes be conducted to determine the necessary dosage to obtain the required result in the application process.

Flexographic Inks:

Goma Laca is a raw material used to produce alcohol based flexographic inks, rendering good gloss, flexibility, prompt drying and adherence.

Example Formulation:

| Product | Weight (%) |
|-------------|------------------------|
| Goma Laca | 30.0 – 40.0 |
| Dye/Pigment | 1.0 – 10.0 |
| Ethanol | Enough to reach 100.00 |

Fireworks:

The alcoholic solution of Goma Laca can be used in the impregnation of paper used in the production of fireworks to protect against moisture. It can also be used as a binder that holds the mixture together and helps produce a vivid color. Example Formulation:

| Product | Weight (%) |
|---------------------|------------|
| Goma Laca | 15.69 |
| Ethanol | 41.84 |
| Potassium Chlorate | 26.15 |
| Sulfur | 10.04 |
| Iron Oxide (Powder) | 2.62 |
| Plaster (gypsum) | 2.62 |
| Lithopone | 1.05 |
| Infusory Earth | 0.52 |



Mirrors:

Our product is used as a fixing and protection varnish for the layer of silver nitrate in the production of mirrors.

Capping Cement for Lamps:

Goma Laca is used to produce the capping cement that connects the glass bulb to the metal screw of the lamp, as a phenolic resin plasticizer.

Example Formulation:

| Product | Weight (%) |
|--|------------|
| Goma Laca | 3.0 |
| Ethanol | 20.0 |
| Phenolic Resin | 3.0 |
| Fillers (Sand, lithopone, and stones) | 73.0 |
| Malachite and/or Hexamethyl-tetra-amine. | 1.0 |

Polish for Wooden Surfaces:

Example Formulation:

| Product | Weight (%) |
|------------------------|------------|
| Goma Laca | 19.0 |
| Methyl-cetone peroxide | 10.0 |
| Carbowaxy 5243* | 5.0 |
| Ethanol | 65.0 |
| Fragrance | 1.0 |

*Carbowaxy 5243 is a fumaric resin supplied by Polytrade

Furniture:

Goma Laca can be combined with the Indian shellac gum improving the quality of the varnish coating in relation to gloss and time of drying. It can also be used in combination with synthetic resins, mainly those produced from colophony, nitrocellulose and P.V.A. Goma Laca can be dissolved in ethanol to make a liquid varnish for wood finish, for instance:

| Product | Weight (%) |
|-----------|------------|
| Goma Laca | 40.0 |
| Ethanol | 60.0 |

Foundry Paints:

Goma Laca is used in the paint formulations and varnishes for the foundry industry. These paints are added to the interior of sand molds and the resulting castings have a smooth finish and no roughness. Thus, using Goma Laca in foundry paints reduces the cost of machining and polishing.

Benefits of using Goma Laca in Foundry Paints:

- Easy dissolution in ethanol
- Great adhesion properties in refractory
- Low volume of generated gases
- High yield of paint
- Good stability of the resulting paste

Basically, there are three (3) types of die casting depending on the type of melt that will receive the casting mold, they are:

- 1) Zirconia Paint
- 2) Graphite Paint
- 3) Magnesite Paint

All foundry paints are composed of resin, solvent, refractory and fillers. Therefore, it is necessary to dissolve the resin first, forming a 40% solids solution of Goma Laca resin in ethyl alcohol. We suggest the three (3) following compositions for the above-mentioned foundry paints:

1) Example Formulation for Zirconite Paint:

| Product | Weight (%) |
|------------------------|------------|
| Goma Laca (40% solids) | 4.0 |
| Zirconite | 61.0 |
| Talc | 10.0 |
| Quartz | 10.0 |
| Balcay Bentonite | 2.0 |
| Ethanol | 8.0 |
| Water | 5.0 |

Note: First dissolve Goma Laca in ethanol at a 40% solids content

2) Example Formulation for Graphite Paint:

| Product | Weight (%) |
|------------------------|------------|
| Goma Laca (40% solids) | 9.5 |
| Graphite | 9.5 |
| Graphite 90 - 200 | 14.0 |
| Talc | 7.0 |
| Quartz | 25.0 |
| Balcay Clay | 15.0 |
| Ethanol | 17.5 |
| Water | 2.5 |

Note: First dissolve Goma Laca in ethanol at a 40% solids content

3) Example Formulation for Magnesite Paint:

| Product | Weight (%) |
|-------------------------|------------|
| Goma Laca (40% solids) | 9.0 |
| Magneite | 65.0 |
| Bentone 34 (tixotropic) | 1.4 |
| Talc | 4.0 |
| Balcay Clay | 1.7 |
| Ethanol | 3.4 |
| Isobutanol | 3.5 |
| Water | 12.0 |

Note: First dissolve Goma Laca in ethanol at a 40% solids content

DIRECTIONS FOR USE IN FOUNDRY PAINTS:

First, dissolve Goma Laca in ethanol at a 40% solids content. Then, introduce fillers into a planetary mixer with stirring. Add the refractory material, the resin at 40% concentration in alcohol solution and the solvent. After one (1) hour unload the mixture, which will be in a paste form and ready for use.

Depending on use, further dissolve the paste in ethanol to achieve the right consistency according to the application tool: pistol gum, brush, or other. A well homogenized mixture leads to good dissolution in ethanol. When molten metal is poured, the resin and solvent disappear in refractory material and filler adheres to the mold.

SOLUBILITY

- Soluble in ethanol, methanol, acetone and esters.
- Insoluble in water, aliphatic and aromatic solvents.

PACKAGING

- Paper bags of 25 kg (55 lbs)
- Super Bags of 1,000 kg (2,204.62 lbs)
- We recommend storage in dry and fresh places

PRODUCT INFORMATION AND SAFETY

Please read our Material Safety Data Sheet (MSDS) for detailed information.

Note: The information given here is valid at the time of publication and Polytrade reserves the right to amend any without notice. We try our best to keep our records up to date, but if you want the latest information, contact one of our agents. Also, the data and suggestions regarding this product are given in good faith, but without guarantee, since the ultimate use of our products is beyond our control.