Lascaux Synthetic Resins and Dispersions

Acrylic Resin P 550 (Plexisol) 40% gloss

**Base**
Organic solution of an acrylic resin based on butyl methacrylate Tg 25°C.

**Properties**
- pure, soft, thermoplastic acrylic resin
- lightproof and age-resistant
- glass transition temperature (Tg) 25°C

**Solubility**
Soluble in White Spirit 16/18, xylene, toluene, acetone, methoxypropanol. Partially soluble in ethanol, isopropanol.

**Uses**
For conservation and consolidation of paint layers, lining of fine textiles, as well as a varnish.

**Application**
For conservation and consolidation of paint and ground layers on paintings on canvas, a 5-10% solution (1:4 to 1:9 in white spirit 16/18) is used. After drying of the resin, the painting can be flattened under light pressure and heat (approx. 40°C). Excess resin is removed afterwards with white spirit. When used highly diluted, this resin does not alter matt paint layers.

For consolidation of chalking paint layers on mural paintings (distemper, casein or fresco painting), a solution of 3-5% can be applied to the required degree of saturation. Excess resin is to be removed with white spirit. Acrylic Resin P 550-40% gloss is also suitable as an adhesive for lining fine textiles. A 10% solution in white spirit is either sprayed onto the lining fabric or onto both sides of an intermediate support. After drying of the resin, proceed with the lining at approx. 45°C and under light pressure. Acrylic Resin P 550-40% gloss can also be used as a varnish, although Acrylic Resin 550/875 is preferable, having a slightly higher Tg of 40°C and better scratch resistance.

**Safety**
Please refer to the safety data sheet.

**Storage**
Keep containers closed when not using the product. Store in a cool and dry place.

**Size**
Jars of 1l

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Paraloid B 72

**Base**
Copolymer of ethyl methacrylate.

**Available:**
- Granules
  - 50% gloss, solution in toluene
  - 10% gloss, solution in toluene/isopropanol 5:4
  - UV Protect 1 gloss
  - UV Protect 2 matt
  - UV Protect 3 semi matt
  - Fixativ liquid, 2% solids in solvent mixture
  - Fixativ spray

**Properties**
- thermoplastic acrylic resin
- lightproof and age-resistant, non-crosslinking
- medium-hard
- glass transition temperature, approx. 40°C
- softening point, approx. 70°C
- melting point, approx. 150°C

**Solubility**
Soluble in toluene and acetone. Dilutable with xylene, Shellsol A, isopropanol, ethanol, methoxypropanol (PM). Insoluble in white spirit.

**Viscosity**
approx. 200 mPas in acetone (40% solution at 25°C), approx. 600 mPas in toluene (40% solution at 25°C), approx. 980 mPas in xoluene (40% solution at 25°C)

**Use**
Paraloid B 72 has been used since the 1950s in conservation as a consolidation agent and as a picture varnish. Extended tests have shown it to be one of the most stable resins used in the conservation of works of art.

Paraloid B 72 is used to consolidate and impregnate mural paintings and oil paintings, as a fixative for charcoal and chalk drawings, pastels, as well as for the consolidation of wood. It is also recommended as an adhesive for glass and ceramics.

**Application**
When working with Paraloid B 72, the right thinning rate is decisive for a successful treatment. Tests should be made in order to determine the thinning rate and the appropriate solvent to provide good penetration and consolidation properties. Since objects show different absorptions, it is advisable to work with lower concentrations and, if necessary, to repeat the application. There is a risk of undesired saturation on the surface of the object when working with too high concentrations. The solvent retention must be taken into consideration.
Especially when using solvents with a low evaporation rate. It may take days or weeks for complete evaporation of the solvent. The result of the consolidation can be judged only after complete drying of the resin. Excess resin or gloss are to be removed with toluene.

**Examples**

a) Mural paintings
For the consolidation and impregnation of mural paintings (a fresco/secco), limewash and silicate paint, crumbling plaster, etc. a solution of max. 5% in toluene/isopropanol is used. It is applied in several layers until the required degree of saturation is reached.

b) Paintings
For the conservation and consolidation of ground and pigment layers on wood or canvas supports, a 5 - 10% solution in toluene/toluene/isopropanol is to be used. After drying, possible cuppings can be flattend out with a heating spatula.

When used as a varnish, a 10% solution in toluene/xylene is applied. While the first layer can be applied with a brush, each subsequent layer should be sprayed on.

Please note that in certain cases, depending on the ambient temperature, hazing can occur due to evaporation. To overcome this problem, 10% Shellsol A or methoxypropanol (PM) should be added to the spray solution.

c) Wood
For wood consolidation, solutions of 5 - 10% in toluene are recommended. Impregnation is to be done in a wet-in-wet technique until saturation is reached. For slower and deeper penetration, solutions in toluene/xylene or toluene/Shellsol A are preferable.

d) Glass and ceramics
Paraloid B 72 has proven useful as an adhesive for glass and ceramics. Solutions in acetone, acetone/alcohol dry very quickly. Depending on the porosity of the fragments, the edges should be isolated with a 10% solution to ensure good adhesion. A 20-40% solution is to be applied along the edges before the fragments are put together. Another method consists of reactivating the dry adhesive with solvent before the fragments are joined.

e) Fixativ
Paraloid B 72 is also very suitable as a fixative for pencil, chalk and charcoal drawings, pastels, etc. Spray applications of 2 - 4% in toluene/isopropanol are recommended. A ready-to-use solution of 2% is supplied in 12 oz. spray cans as Lascaux Fixativ.

f) Lascaux UV Protect
Lascaux UV Protect is an archival varnish with UV protection (light-fast, age-resistant and re-soluble). It is universally applicable and suitable for all Lascaux colour ranges. It can also be used on oil, tempera, watercolour and pastel painting, and is also suitable for drawings, inkjets and photos. The required surface is obtained by spraying on the varnish in fine, carefully metered layers. Avoid wet patches. With its short drying times it is easy to work with. Fine layers can be achieved with carefully dosed spraying.

Short drying time. Solvent odour dissipates quickly. Apply as many layers as required to achieve desired surface. UV protection increases with each additional layer of varnish. Final sealing also increases colour intensity and can result in a slight change in colour tone. Varnish layer can be removed using solvents, e.g. with a mix of isopropanol/special boiling point spirit 100/140 in a ratio of 1:2 to 1:1. Varnish layer can be cleaned using paintbrush cleaner, special boiling point spirit 100/140 or white spirit 16/18. Lascaux UV Protect is available in 400 ml spray cans in three gloss levels (gloss, matt and semi matt).

**Safety**
Please refer to the safety data sheet.

**Storage**
Keep containers closed, when not using the product. Store in a cool and dry place.

**Sizes**
Granules: buckets of 1 kg
50% gloss, solution in toluene: cans of 1 l
10% gloss, solution in toluene/isopropanol: cans of 1 l and 5 l
UV Protect 1 gloss, UV Protect 2 matt, UV Protect 3 semi matt: cans of 400 ml
Fixativ liquid: cans of 500 ml and 1 l and 5 l,
Fixativ Spray: cans of 300 ml

**Mowilith® 30**

**Base**
Polymerisate of vinyl acetate.

**Properties**
- thermoplastic
- excellent lightfastness, high transparency
- the degree of polymerisation increases with increasing numerical value, as does the viscosity of the solution as well as the hardness and the tear resistance of the film.
- Viscosity (20% in EE) at 20°C: 22-30 mPas
Glass transition temperature (Tg): 30-40°C
Softening point: 105-125°C

Solubility
Soluble in ethanol +5% water, ethyl acetate, butyl acetate, acetone, methyl ethyl ketone, methyl isobutyl ketone, toluene. Limited solubility in waterfree ethanol, xylene. Insoluble in cyclohexane, special boiling point gasoline (80/110), diethyl ether, water.

Applications
For the bounding of paper, fabrics, leather, wood, etc., when a thick film with low working viscosity is desired.

Use
The granules can be dissolved by stirring them in a suitable solution.

Safety
Please refer to the safety data sheet.

Storage
Keep containers closed when not using the product.

Size
Buckets of 1 kg

Mowilith® is a registered trade mark of Celanese Emulsions GmbH.

Medium for Consolidation

Base
Finely dispersed, aqueous dispersion of an acrylic copolymer.

Properties
- dries to a clear and flexible film
- light-fast and age-resistant
- excellent penetrating power
- solids content: 25%
- MFT (Minimum film formation temperature): approx. 4°C
- pH: approx. 8-9

Solubility
Dispersion dilutable with water. Film soluble in esters, aromatics, acetone, MEK.

Applications
The Medium for Consolidation has been developed in cooperation with the Swedish National Heritage Board for the consolidation of paintlayers in medieval polychromy on wood.
The Medium for Consolidation has excellent penetrating power due to its low viscosity. This allows for the safe and efficient consolidation of loose and chalking paint layers, even on water-sensitive surfaces such as gilding or thin layers of distemper. These can be consolidated without swelling or spotting on wooden or textile supports.
The concentration of the medium can be adjusted by addition of distilled water. Prior to application of consolidant, white spirit can be used as wetting agent.
Excess Medium of Consolidation can be removed completely with acetone or xylene after a drying time of approx. 24 hours.
The Medium for Consolidation has been successfully used in numerous Swedish restoration studios.

Safety
Please refer to the safety data sheet.

Storage
Keep containers closed when not using the product.
Store at constant temperature between 5°C and 25°C.
Undesired sediments which might appear during storage can filtered off before application.

Size
Bottles of 250 ml and 1 l.

Literature

Medium for Retouching
(Mowilith® 30)

Base
Polyvinyl acetate
40% solution in ethanol/acetone 7:3.

Properties
- thermoplastic
- flexible film
- excellent lightfastness, high transparency

Solubility
Soluble in ethanol + 5% water, acetone, toluene. Insoluble in aliphatic hydrocarbons such as White Spirit.

Use
Retouching medium for powder pigments.

Application
Lascaux Medium for Retouching can be mixed with appropriate powder pigments directly on the palette. Since every pigment has a different demand for binder,
experience is required to achieve the right balance between binder and pigments, i.e. the required degree of saturation (matt, semi matt or gloss).
To dilute the Lascaux Medium for Retouching, it is recommended to use a mixture of ethanol and 10-30% methoxypropanol PM or diacetone alcohol, in order to adapt the drying time of the medium to the retouching requirements.

Safety
Please refer to the safety data sheet.

Storage
Keep containers closed when not using the product.
Store in a cool and dry place.

Size
Bottles of 200 ml and 1 l

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