

B72 Retouching Gels (8 jar set)

Liquid crystal phase gels of Paraloid B72 solutions in propylene glycol ethers media were developed by Peter Koneczny in the early 1990's, and since then have been used successfully in the retouching of a wide range of difficult and complex surfaces on both modern and old master paintings. The purpose driving their development was to create retouching media that mimic the rheology and handling properties of painting media used on original artwork. This allows the painting conservator-restorer to imitate both the original technique of the artist and also aged paint effects through the use of this modern, stable, non-ageing material. All B72 Retouching Gels are based on Paraloid B72 with an addition of HALS (hindered amine light stabiliser) dissolved in propylene glycol ethers, which are the preferred solvents chosen for their good toxicological profile.

B72 Retouching Gels provide a range of retouching media of great versatility. The properties of the gels can be varied to suit the specific requirements of particular retouching situations by changing the concentration of Paraloid B72, by adjusting the hardness/softness of the gel and by choosing solvents with different evaporation rates. The Gels can be mixed with each other and with solutions of Paraloid B72 or polyvinyl acetate to provide an infinite range of properties and final effects.

~%	PM		PnP	DPM
	LC/Si	LC	LC	LC
25	Fast - Hard 25 Si			
20		Fast - Heavy 20	Slow - Heavy 20	
10	Fast - Light 10 Si	Fast - Light 10	Slow - Light 10	Very Slow - Light 10
7.5		Fast - Very Light 7.5		

Three solvents of different evaporation rate are used: fast evaporating **Dowanol PM** propylene glycol monomethyl ether (1-methoxy-2-propanol) with an evaporation rate comparable with xylene, slower evaporating **Dowanol PnP** propylene glycol n-propyl ether (1-propoxy-2-propanol) with an evaporation rate comparable with white spirit or Shellsol 100 and very slowly evaporating **Dowanol DPM** Dipropylene glycol monomethyl ether (1-(2-methoxyisopropoxy)-2-propanol) which dries as slowly as Shellsol D60. Gel with **Dowanol DPM** takes a very long time to dry, and so gives the feel of working with oil paint. It should not be mixed with other gels to paint impastos, nor applied in thick layers, nor used for underpainting.

The choice of gel or mixture of gels with different drying times depends on the scale and complexity of the retouching. As thinners one can use the solvents originally used in the gels (Methyl Proxitol from Shell is an equivalent of Dowanol PM, Methyl Diproxitol is an equivalent of Dowanol DPM) and Industrial Methylated Spirit. The addition of IMS increases the flow of the paint. The use of Shellsol 100 and xylene is not recommended.

The eight B72 Retouching Gels provide a range of media that vary in concentration of Paraloid B72 and hardness/softness. By mixing gels together one can adjust the properties of retouching medium to address the specific requirements of paint handling properties and the final appearance of the dried paint.

Because of the high viscosity of the gels special attention has to be paid to the proper dispersion of pigments in the medium. Paint containing agglomerates of pigment particles will dry with a rough surface. Such a result can be avoided by grinding pigment with gel for longer and more vigorously or by premixing pigments with a standard solution of Paraloid B72.

Application of B72 Retouching Gels

All the B72 Retouching Gels allow painting wet-in-wet, providing the same effects as those achieved by painting with artist colours or industrial paints.

Fast - Hard 25 Si, **Fast - Heavy 20** and **Slow - Heavy 20** gels are excellent for painting impastos and for painting with a spatula or palette knife. **Fast - Hard 25 Si** is suitable for painting extremely high impastos. **Si** included in the name of the gel indicates an addition of fumed silica in its composition, which provides an extra hardness to the gel resulting in rich, crisp, well-defined textures. Bristle brushes are recommended for use with this medium. **Fast - Heavy 20** and **Slow - Heavy 20** gels give textures with soft, fluid edges. They can be mixed with **Fast - Hard 25 Si** in order to obtain a range of intermediate textural effects. **Slow - Heavy 20** gel can be used on its own for painting on large areas and for painting wet-in-wet or can be added to **Fast** gels in order to prolong their drying time, and especially to extend the open time available for working with **Fast - Hard 25 Si** gel. Paint for heavy impastos and textures should be rich in pigment in order to avoid shrinkage and subsequent cracking during the drying process. **Light 10** gels should not be used for painting heavy textures. Having a false body made mainly of solvent they are comparable with the traditional megilp. The resulting heavy impastos will crack and be brittle.

Fast - Hard 25 Si, **Fast - Heavy 20** and **Slow - Heavy 20** gels are also suitable for texturing fillings prior to retouching and for painting transparent textures on the top of the paint layer.

Fast - Light 10, **Slow - Light 10**, **Very Slow - Light 10** gels are the ideal media for glazing. The choice of the gel depends on the area to be glazed. Slower evaporating solvents allow glazing over larger areas. **Light 10** gels give very thin and dry looking glazes similar in appearance to the glazes on well-aged old master paintings. For richer, more substantial glazes **Light 10** gels can be mixed with a standard solution of Paraloid B72 and **Heavy 20** gels.

Glazes can be applied very precisely with gels, allowing the retouching of losses of glazes without overflowing the edges of the original glazes. The migration of the pigment during drying is prevented by pigment particles being held in place by the liquid crystal structure of the medium. This prevents the creation of drying rings and also the change in colour caused by the migration and separation of pigment particles.

The liquid crystal structure of the gels has a great advantage over the standard solution of Paraloid B72 as it allows glazes to be painted wet-in-wet, giving crisp and precise results without the uncontrollable migration and mixing of paints.

Heavy 20 and **Light 10** gels can provide results achieved by the artist using megilp. They allow the application of fluid, semitransparent, textured brushstrokes so common on old master landscape paintings. Leaves in the crowns of trees serve as an example. They are usually painted with delicate, rapid brushstrokes using a fluid paint, rich in medium, leaving the edges of the brushstrokes slightly thicker and raised. The semitransparent, textured effect is also ideal for reconstructing and retouching lace on old master portraits. As megilp was so extensively used by the artists B72 Retouching Gels prove to be the perfect retouching medium for imitating their painting technique.

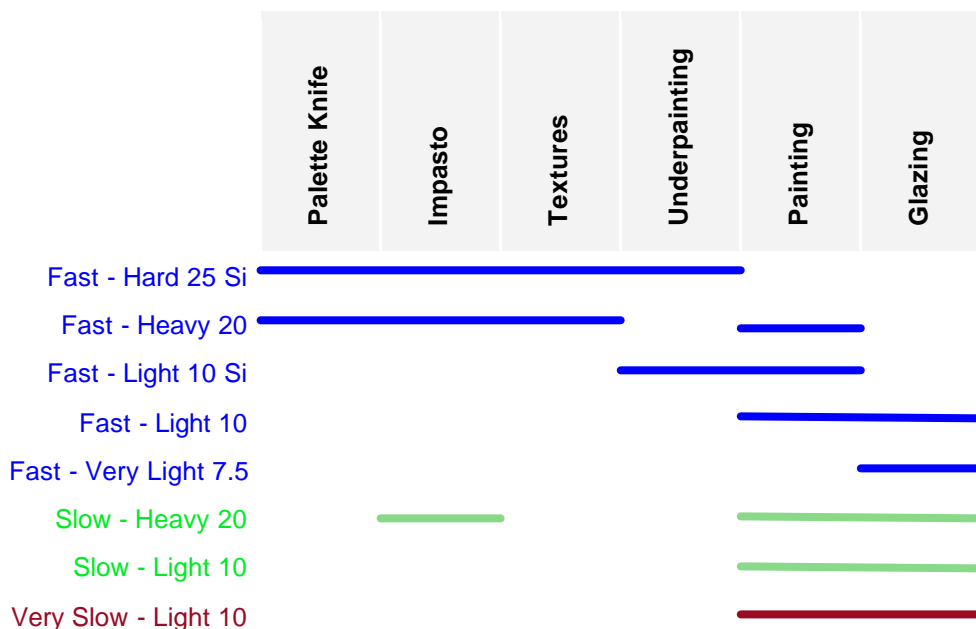
Fast - Light 10 Si gel contains silica as a matting agent and is also slightly thicker than other light gels. It was especially developed for retouching absorbent surfaces and absorbent, dry, matt paint such as gouache. **Fast - Light 10 Si** gel, due to its increased order of liquid crystal and the presence of fumed silica, holds the solvent in its structure to a greater degree than other light gels. This limits the migration of the resin into the absorbent support, and also into the original absorbent paint, thus preventing their discoloration.

Fast - Light 10 Si and **Fast - Hard 25 Si** are especially suitable for underpainting. Their content of silica makes them more resistant to dissolving during further retouching on their surface.

Fast - Very Light 7.5 gel can be used for mixing with **Light 10** and **Heavy 20** gels to increase their fluidity. It is also used as an additive for the standard solution of Paraloid B72 in order to increase its viscosity without increasing its concentration. On its own **Fast - Very Light 7.5** is used for applying extremely dry glazes that imitate dirt on painted reconstructions.

Very Slow - Light 10 gel developed for the glazing of large surfaces is also used as a drying retarder for mixing with other gels (with the exception of **Fast - Hard 25 Si**) to facilitate wet-in-wet painting over a prolonged period of time. It should never be used for underpainting. Paint containing **Very Slow - Light 10** gel should be left for a few days to dry completely before glazing and varnishing.

Recommended uses of B72 Retouching Gels



These are some of the examples and recommendations for the application of B72 Retouching Gels. For more information about their properties and different uses please visit www.artcare.org Commonly asked questions are answered on the FAQ page. Should you have any other queries please contact us.

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