Established : 18.03.14

ULANO QT Thix

Highly viscous, one-component photopolymer emulsion for very high stencil build-up thickness

ULANO QT Thix is a one-component photoemulsion. High viscosity and solids content make it especially suitable for direct coating of coarse mesh and the production of stencils with a high coating thickness. Stencils made with **ULANO QT Thix** are typically used for printing plastisol and specific applications of the textile and ceramic industry.

PROCESSING

DEGREASING

Before coating, it is recommended to clean and degrease the screen mesh to achieve reproducible coating results. Ensure proper tension of the screen mesh. Use manual degreasers or degreasing concentrates for automatic cleaning units. After thorough rinsing with water and drying, the screens are ready for coating.

SENSITIZING

Not applicable, as ready-to-use.

COATING

ULANO QT Thix can be coated manually or by machine. The use of a coating machine is especially recommended, because it achieves an even and reproducible coating result. Use a coating trough with a round edge with a radius of approx. 1,5-2,5 mm.

In order to avoid bubbles during coating, do not stir **ULANO QT Thix** prior to use. Coat the stencil slowly and evenly. Ensure that the mesh openings are filled from the printing side first (generally 2-3 coatings). Only then begin with the emulsion build-up from the squeegee side - depending on the print job.

In order to avoid that the emulsion runs down the screen when working with very coarse mesh, we recommend turning the stencil by 180° after 4-5 coatings from the squeegee side and then continue coating from the squeegee side until achieving the desired emulsion thickness

Notice:
ULANO QT Thix was developed for coating very coarse mesh (8-12 threads/ cm). When working with fine mesh, or for special applications, **ULANO QT Thix** can be reduced with approx. 2-5% water (distilled or de-ionized).

DRYING

In order to achieve the highest resistances of the screen printing stencil, the coated screens have to be dried well before exposure. This should preferably be done in a dust-free drying-chamber with fresh-air inlet at temperatures of between 35-40°C. Depending on the coating technique and the mesh, it may be of advantage to dry the stencils with the printing side showing upwards.

Notice:
When using a mesh coarser than 15-250 W, we recommend drying the stencil for 4-5 minutes with the printing side upwards, than continue drying with the printing side downwards.

Drying time depends on the emulsion thickness. Emulsion thicknesses of approx. 500 µm should dry for at least 6-8 h, thicknesses of approx. 1000 µm 8 h, preferably over night.

ULANO · Division of Kissel + Wolf GmbH · In den Ziegelwiesen 6 · 69168 Wiesloch · Germany · Tel. +49 6222 578-0 · Fax +49 6222 578-100
ULANO Singapore Rep. Office · 16 New Industrial Rd. #05-07 · Hudson TechnoCentre · Singapore 536204 · Tel: +65 6252 3411 · Fax: +65 6252 3414
www.ulano.eu

POST COATING
When the stencil build-up thickness is very high, the anchoring of the emulsion to the mesh can be improved by an additional 2-3 coatings from the squeegee side. After drying the stencil again, exposure can be started.

EXPOSURE
The stencil is created by UV-light hardening of the non-printing stencil parts. Expose with blue actinic light at a wave length of 320-380 nm. A metal halide lamp provides best results.

Due to the many variables that determine the actual exposure time, accurate exposure times cannot be given. Optimum copying results can only be achieved by trials (step exposure). For best resistances, please choose an exposure time which is as long as possible. This maximum exposure time must still allow reproduction of fine details. This is especially important when water based printing inks are used, as in this case the resistance will be achieved by the exposure time.

DEVELOPING
Method 1:
The exposed stencil can be developed with low pressure (approx. 30 bar) from both sides, with the final washing preferably from the printing side. A stencil thickness of approx. 1000 µm can be developed with higher pressure (approx. 60 bar) from the printing side. During developing/ rinsing the stencil becomes soft, therefore work carefully without too much water pressure.

Method 2:
Before developing, put the exposed stencil into a basin with cold water. After 15-30 minutes (depending on the stencil build-up thickness) the unexposed parts can be rinsed with low water pressure (approx. 30 bar).

Developing time depends on the stencil build-up thickness. Thicknesses of approx. 200-300 µm need approx. 15-20 minutes; thicknesses of 500 µm approx. 20-30 minutes and thicknesses of approx. 1000 µm approx. 30-60 minutes for developing.

Notice: In order to achieve highest resistance, the exposed and developed stencils have to be dried thoroughly prior to printing.

POST CURING
To achieve optimum resistance, the completely copied and dried stencil can be exposed again from the squeegee side, e.g. 3-5 minutes with a 5000 W metal halide lamp at a distance of approx. 1 m.

RETOUCHING/ BLOCKING-OUT
For retouching / blocking-out a product of our screen filler range. Ask your distributor or our technical department for advice.

DECOATING
Due to the high stencil build-up thickness we recommend to moisten the screen thoroughly with water. After 5-10 minutes, apply a decoating product and let the solution react for some time. Spray off with a high pressure water washer.

Ink residue or so-called ghost images which may remain on the screen after decoating, can be removed with post-cleaning products. Trials are essential as the type of residue may vary. Please make tests and ask for samples.

NOTICE
Please note that the printing resistance of a screen printing stencil is influenced by lots of parameters e.g. mesh, coating technique, drying, exposure time etc. Furthermore, a lot of printing media and printing machines are being used in practice which have not all been tested by us. Therefore, please accept our offer and test the suitability of our products by asking for emulsion samples, as we can only guarantee a constant quality according to our own working conditions.

COLOUR	Red
VISCOSITY	Approx. 27.000 mPas (Rheomat RM 180, MS 33, D = 30 s^{-1}, 23°C)
HEALTH HAZARDS/ ENVIRONMENTAL PROTECTION	Please follow further information given in the material safety data sheet.

STORAGE

1 year (at 20-25°C) Protect against frost.

Screens coated in advance: at least 4 weeks (stored at 20°C and in complete darkness).Dry again prior to copying.