

UV TACTILE LACQUER

Technical Data Sheet

UV screen printing lacquers

1. APPLICATION FIELDS:

UV curing lacquers in order to achieve a relief effect through a high ink layer in the range from 10 - 250 microns depending on the screen mesh used. The high gloss lacquer exhibits good flexibility and high resistance against different substances (alcohol, thinned acids, thinned lye's, cleaning liquids and hygiene products). Suitable for paper, board, and plastics.

Substrates may differ in their chemical structure or method of manufacture. A test for suitability must always be carried out before printing.

2. CHARACTERISTICS:

The relief (tactile) lacquers are constitutionally free from toxic elements and solvents. The fast curing, flexible and high transparent lacquer is suitable for all common silk screen presses, especially for high speed rotary screen printing systems.

The used raw materials also comply with the limits of metal elements stipulated by the actual EEC regulation EN 71 (Safety of Toys), part 3 (Migration of Certain Elements).

To obtain coloured relief effects one can add up to 5% inks of the basic colour mixing system.

Special effects can be obtained through the addition of Iridine metallic pigments or a mixture of Iridine pigments.

3. PRODUCTS:

3.1 High Tactile approx. 150 - 250 µm high:

960UV290	flatbed screen printing
960UV298 (Type, Symbol)	rotary screen printing
960UV393 (Solid tone area)	rotary screen printing

3.2 Low or medium Tactile approx. 50 - 100 µm high:

960UV438	flat bed and rotary screen printing
960UV600 (Transparent, flexible, free from silicone)	rotary screen printing

4. PROCESSING INSTRUCTIONS:

4.1 Pre-treatment:

Non pre-treated polyolefin materials need to be corona pre-treated prior to printing.

4.2 Stencils/Printing Equipment:

Screen printing meshes between 26-77 threads/cm, RotaMesh® 75/40%, 75-32% RotaPlate® RP 75Z, 75Y or Screeny® BZ, BU, BY are suitable for high tactile effect printing. But for low or medium tactile effect printing is recommended RotaPlate® RP 125W, 125V, 75Q and Screeny® DW.

Printing and approval of the colour is recommended prior to the print job. The 960UV lacquers can be used with all screen printing machines with screen printing stencils as well as rotary screen printing systems currently used for industrial applications. Any acrylic acid ester resistant squeegee material may be used.

4.3 Curing Conditions:

The varying UV absorption of the individual colours results in a range of curing properties depending on colour and opacity. The 960UV lacquers can be cured by the use of medium pressure mercury vapour lamps (at least 160 W/cm).

The optimum energy output is 80 - 150 Mill joule/cm². UV curing is followed by a 12 hour post-cure phase after which the ink film is fully cured and has its final properties.

Ink layers of more than 50 micron should be applied in the last printing station in order to avoid damages of following screen meshes.

However, it must be noted, that low radiation intensity, excessive machine speeds or excessive film thickness can have a negative influence on the curing properties and adhesion.

Un-cured prints are considered a hazardous waste. Therefore, it is recommended to cure misprints under the UV lamp as a matter of principle. After curing, spoilage can be disposed by conventional methods and may be incinerated without causing any difficulties.

4.4 UV-Thinner:

The UV lacquer is ready to use. When using the product on rotary screen printing presses and further viscosity reduction is desired, UV thinner may be added.

UV-Thinner (max. addition: 5 - 10 %) 985UV0014

5. CLEANING:

Screens and squeegees as well as other working materials can be cleaned with the RUCOINX screen cleaner 100VR1272. If cleaning is not performed by fully automatic cleaning equipment, protective gloves must be worn.

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Cleaning liquids that are contaminated with UV products should not be used for the washing of working materials that were used with conventional screen printing inks. Solvents that contain UV residue are not suitable for reclamation and must be treated as a separate waste.

Biodegradable Cleaner

100VR1272

6. SHELF LIFE:

A shelf life of **24 months** is guaranteed when storing the inks at 21 °C and in the original packing container. At higher storage temperatures the shelf life will be reduced.

7. PRECAUTIONS:

UV inks may cause irritations and can increase the sensitivity of the skin, possibly leading to hypersensitivity. Therefore, the use of disposable gloves and protective goggles is strongly recommended.

For further information on the safety, storage and environmental aspects concerning these products please refer to the Material Safety Data Sheet (MSDS).

Additional technical information may be obtained from our Product Management Department.

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The above statements are accurate to our best knowledge and belief. However, due the great number of possible influences during the manufacture of the substrate and the variation in the application process we suggest that suitability testing take place under actual conditions before production. No legally binding guarantee of certain properties or of the suitability for a definite application purpose can be derived from the above information.

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