

# SILICONE FREE OPAQUE WHITE 900 UV 1425



## Technical Data Sheet

## UV Screen printing ink

### 1. APPLICATION FIELDS:

Universal low-viscous UV screen printing ink for printing on plastic film, especially in rotary screen printing, applicable for

- TC Polyolefine like TC Polyethylen (PE) and TC Polypropylen (PP)
- Polyolefine like Polyethylen (PE), Polypropylen (PP)
- TC Polyester
- PVC and other plastic films
- Paper und cardboard.

Substrates may differ in their chemical structure or method of manufacture. A test for suitability must always be carried out before printing. Antistatic, Mould Release Agents and Slip Additives may have negative effects on adhesion, and should be detected and removed prior to printing.

### 2. CHARACTERISTICS:

The silicon free and low-viscous Opaque White 900 UV 1425 is very reactive in nature assuring excellent curing and adhesion even when printing at high machine speeds up to 60 m/ min.

900 UV 1425 shows excellent qualities in

- Very good levelling
- Very good overprinting with UV – Flexo-, Offset- und Letterpress ink
- Good solvent and water resistance after 12 hours.

900 UV 1425 is hot-foil stamp-able with many on the market obtainable foils. 900 UV 1425 is also suitable for overprinting hot-foil prints.

A test for suitability must always be carried out.

900 UV 1425 is constitutionally free from toxic elements and solvents. The raw materials used meet with the limits stipulated by the EEC regulation EN 71 (Safety of Toys), part 3 (Migration of Certain Elements) of December 1994.

### 3. ADDITIVES:

The ink 900 UV 1425 is ready to use.

### 4. PROCESS INSTRUCTIONS:

#### 4.1 Pre-treatment:

Pre-treatment of polyolefines (PE/PP) must be performed by CORONA-discharge in order to insure the adhesion of

the UV screen printing ink to the substrate. In case of PE, surface tension needs to be at least 42 mN/m (Dynes/cm), in case of PP at least 48 mN/m (Dynes/cm).

#### 4.2 Preparation for printing with silicon-free inks:

When printing with silicone free inks, we must take into consideration that equipment like pumps, syringes, containers, squeegees and screens have to be silicone free.

Therefore they have to be cleaned with alcohol for example isopropanol.

Screens from washers / automated screen cleaning equipment muss be cleaned by hand prior to using to insure that no silicone contamination / residue is left remaining on the screen .

Before printing, we recommend to stir the ink 900 UV 1425.

#### 4.3 Stencils / Printing Equipment:

Suitable mesh types are: RotaMesh® RM 305/17%, RM 305/13% or mesh type Screeny® KM and KS which are used on rotary screen printing machines.

Any acrylic acid ester resistant squeegee material may be used.

#### 4.4 Curing conditions:

The opaque white 900 UV 1425 can be cured by the use of medium pressure mercury vapour lamps (at least 120 W/cm).

The optimum energy output is 100 - 200 Millijoule/cm<sup>2</sup>. UV curing is followed by a 12 hour post-cure phase after which the ink film is fully cured and has its final properties.

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.

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## 5. CLEANING:

Screens and squeegees as well as other operating materials can be cleaned with the RUCO screen cleaner 37220.

The cleaning has to be done carefully and separate from the cleaning of silicon added inks. Any contamination by silicone has to be carefully avoided.

If cleaning is not performed by fully automatic cleaning equipment, protective gloves must be worn. 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.

Universal Cleaner UR 37220  
Cleaning agent f. cleaning equipment WR100VR1240C

## 6. SHELF LIFE:

A shelf life of 12 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 staff of the Technical Application Department.

A.M. RAMP & Co. GmbH  
Lorsbacher Straße 28  
D-65817 Eppstein  
Tel: ++49 (0) 6198-304-0 FAX:++49 (0) 6198-304-287  
E-Mail: [info@ruco-inks.com](mailto:info@ruco-inks.com)  
[www.ruco-inks.com](http://www.ruco-inks.com)

