

# SERIES T28 FOR GLASS



## Technical Data Sheet

## Pad printing inks

### 1. APPLICATION FIELDS:

Versatile two component ink for pad printing onto **glass** and metal. 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:

This glossy, physically drying and chemical reactive pad printing ink exhibits good mechanical and chemical resistance, as well as a good flexibility. A special product test is recommended prior to production.

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

For Gold- and Silver inks it is recommended to proof if the thresholds for aluminum, copper and zinc are respected.

### 3. RANGE OF COLOURS:

The basic ink mixing system consists of 10 basic colours and may be used for the mixing of a wide colour shade range.

A chloric free green pigment is not available, therefore we can not offer the basic ink green.

Field proven mixing formulations exist for Pantone®, HKS, RAL, NCS, etc.

Light Yellow	M 01	T28-2003
Medium Yellow	M 02	T28-2004
Orange	M 03	T28-3004
Light Red	M 05	T28-3005
Pink	M 06	T28-3006
Violet	M 07	T28-5003
Blue	M 08	T28-5004
Green	M 09	T28-6001
White	M11	T28-1002
Black	M12	T28-9003
Clear Base	M 0	T28-0002

### 4. ADDITIVES:

#### 4.1 Thinner:

Prior to production, the pad printing ink has to be adjusted to the printing viscosity by the addition of thinner.

Thinner for glass (addition: 15 - 25 %) 100VR1390

#### 4.2 Hardener:

For printing onto glass and metal hardener 100VR1294 is recommended in order to achieve a better adhesion and resistance. Afterwards heat treatment for 20 minutes at 80°C is required. At room temperature of 20°C a pot life of approximately 8 hours can be achieved.

Hardener for printing on glass and metal (add max. 5%) 100VR1294

Please note that the final chemical and physical resistance of the ink is only achieved after 36 hours at room temperature of 20° C.

During processing and drying of the printed ink, the temperature should not be lower than 15° C otherwise the chemical crosslinking is stopped. Also avoid high humidity for several hours after printing as the hardener is sensitive to humidity. While using hardener please note that multi-colour jobs have to be printed during 36 hours. The completely dried ink can not be overprinted.

#### 4.3 Levelling Agent:

The levelling of the ink surface can be optimised by the use of a levelling agent. It must be noted that excessive addition of levelling agent can have a negative influence on the overprintability.

Levelling Agent (max. add.: 0,5-1 %) VM 100VR133

### 5. PROCESSING INSTRUCTIONS:

#### 5.1 Pre-treatment:

Many glass containers are cold end coated (CEC) in order to improve the scratch resistance and obtain a transport protection. Therefore, to achieve good ink adhesion onto glass, a flame, Pyrosil or UVITRO® pre-treatment of the glass surface is necessary.

In dependence of different hot and cold end coatings a special product suitability test is recommended prior to production.

#### 5.2 Cliché/Printing Equipment/Pad:

The T28 series can be used with all pad printing machines with clichés and pads currently used for industrial applications. However, it has to be noted that type (screen) and etching depth of the cliché, mould and hardness of the pad, the adjustment of the ink (addition of thinner and/or retarder) as well as printing speed may influence the printing result.

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## 5.3 Drying Conditions:

At room temperatures (21°C) the inks of T 28 series are grip dry within 5 minutes. While adding hardener to the ink, drying of the ink will take approximately 36 hours at room temperature. To accelerate the ink drying onto the substrate the use of hot air blower or infrared lamps is recommended. It must be noted that after heat treatment a cooling section must be installed in order to avoid that the printed parts stick together.

## 6. CLEANING:

Clichés, squeegees and so on can be cleaned with the RUCO Universal cleaner 32 335. It must be noted that the pad does not come into contact with solvents. For the cleaning of the pad please see to the application references of the pad manufacturers. If cleaning is not performed by fully automatic cleaning equipment, protective gloves must be worn.

Universal Cleaner	UR	32335
Cleaner for cleaning equipment	WR	100VR1240C
Bio degradable Cleaner	BR	100VR1272

## 7. 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.

## 8. PRECAUTIONS:

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.

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The above statements are accurate to our best knowledge and belief. However, due to 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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