



# SERIES 110GE



## Technical Data Sheet

## Screen and pad printing Inks

### 1. APPLICATION FIELDS:

One component ink for screen and pad printing on glass and ceramics as well as metals.

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 screen printing ink exhibits very good mechanical and chemical resistance, as well as a good flexibility. The final oven curing is required for the chemical hardening process and an assumption for the above mentioned resistance.

The colour shades of 110GE are light fast, weather resistant and guarantee high opacity.

### 3. RANGE OF COLOURS:

The basic ink mixing system consists of 12 basic colours and may be used for the mixing of a wide colour shade range. Mixing formulations exist for Pantone®, HKS, RAL, NCS, etc.

#### 3.1 Basic colours:

Light Yellow	B 1	110GE2273
Medium Yellow	B 2	110GE2277
Orange	B 3	110GE3712
Light Red	B 4	110GE3726
Red	B 5	110GE3727
Pink	B 6	110GE3728
Violet	B 7	110GE5586
Blue	B 8	110GE5587
Green	B 91	110GE6440
White	B 11	110GE1094
Black	B 12	110GE9063
Clear Base		110GE0070

#### 3.2 Euro-Colours / 4-Colour Process Printing Inks:

For 4-colour process printing according to DIN 16538, 3 Euro-basic colours are available. Black 110GE9063 can be used as halftone black, if necessary as a mixture with Clear Base 110GE0070 in order to reduce the colour density.

Process-Yellow	110GE2302
Process-Magenta	110GE3793
Process-Cyan	110GE5669
Black B 12	110GE9063

### 4. ADDITIONAL PRODUCTS:

Raster paste can be added to reduce "Dot Gain" and to achieve sharper dots.

Overprinting Lacquer	110GE0072
Raster Paste (max. addition 10%)	110GE0081

### 5. ADDITIVES:

#### 5.1 Thinner:

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

Thinner, very fast (addition 15 - 25%)	35353
Thinner, standard (addition 15 - 25%)	38571

#### 5.2 Retarder:

Retarder will influence the drying time of the ink under different climate conditions. Retarder 35928 is a medium drying retarder, 34392 is a very slow drying retarder. To achieve a longer mesh opening time in screen printing we can recommend for slow print speed the addition of 100VR1393. While using the ink under extreme climate conditions (temperature higher than 28°C) we recommend using the retarder 35928 as a thinner to adjust the viscosity of the ink.

Retarder, standard (addition 5 - 10%)	35928
Retarder, slow (max. addition 5%)	34392
Retarder, very slow (max. addition 15%)	100VR1393

It must be noted that an excessive addition of retarder may negatively influence the ink transfer and impact resistance, due to the slow evaporation of the retarder.

Retarder 34392 should only be used in conjunction with thinner 38571 or retarder 35928.

#### 5.3 Adhesion Modifier:

Adhesion Modifier for glass 100VR1494 should be used in order to achieve a good adhesion onto glass.

At room temperature of 20°C a pot life of approximately 8 hours can be achieved.

Adhesion Modifier for glass (addition 2%)	100VR1494
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#### 5.4 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. addition 0,5-1%)	VM 100VR133
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## 6. PROCESSING INSTRUCTIONS:

### 6.1 Stencils/Printing Equipment:

The inks of 110GE series can be printed with all commonly available screen printing meshes. They can be used with all screen printing machines with screen printing stencils currently used for industrial applications.

During the pad printing application the inks can be used in open as well as closed systems. The colour mixing formulations are based on a 120-34 threads/cm mesh.

### 6.2 Curing Conditions:

While multi-colour printing we recommend an intermediate drying process by infrared lamps or hot air blower. The finally oven drying should be effected at 180°C during 20 minutes.

## 7. CLEANING:

Screens and squeegees and as well as other working materials can be cleaned with the RUCO Universal cleaner 32335. If cleaning is not performed by fully automatic cleaning equipment, protective gloves must be worn.

Universal Cleaner	32335
Cleaner for cleaning equipment	100VR1240C
Bio degradable Cleaner	100VR1272

## 8. 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.

## 9. 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 Product Management Department.

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