SERIES 110GE

RUCO

Technical Data Sheet **Printing inks**

1. APPLICATION FIELDS:

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

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 110 GE are light fast, weather resistant and guarantee high opacity.

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. 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. (see 6.1).

3.1 Basic colours:

Light Yellow	B 1	110 GE 2273
Medium Yellow	B 2	110 GE 2277
Orange	B 3	110 GE 3712
Light Red	B 4	110 GE 3726
Red	B 5	110 GE 3727
Pink	B 6	110 GE 3728
Violet	B 7	110 GE 5586
Blue	B 8	110 GE 5587
Green	B 91	110 GE 6440
White	B 11	110 GE 1094
Black	B 12	110 GE 9063
Clear Base		110 GE 0070

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 110 GE 9063 can be used as halftone black, if necessary as a mixture with Clear Base 110 GE 0070 in order to reduce the colour density.

Euro-Yellow	110 GE 2302
Euro-Magenta	110 GE 3793
Euro-Cyan	110 GE 5669
Black B 12	110 GE 9063

3.3 Bronze Colours:

see separate "Bronze Colours" leaflet

4. ADDITIONAL PRODUCTS:

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

Overprinting Lacquer		110 GE 0072
Raster Paste	(max. addition: 10 %)	110 GE 0081

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 %)	VS 35 353
Thinner, standard	(addition: 15 - 25 %)	VD 38 571

5.2 Retarder

Retarder will influence the drying time of the ink under different climate conditions. Retarder VZ 35 928 is a medium drying retarder, VZ 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 100 VR 1393. While using the ink under extreme climate conditions (Temperature higher than 28°C) it is recommended to use the retarder VZ 35 928 as a thinner to adjust the viscosity of the ink.

Retarder, standard	(addition 5 – 10 %)	VZ 35 928
Retarder, slow	(addition max. 5 %)	VZ 34 392
Retarder, very slow	(addition max. 15 %)	VZ 100 VR 1393

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 VZ 34 392 should only be used in conjunction with thinner VD 38 571 or retarder VZ 35 928.

5.3 Adhesion Modifier:

Adhesion Modifier for glass 100 VR 1294 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 %) 100 VR 1294

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. add.: 0,5-1 %) VM 100 VR 133

6. PROCESSING INSTRUCTIONS:

6.1 Stencils/Printing Equipment:

The inks of 110 GE series can 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 a intermediate drying process by infrared lamps or hot air blower. The finally oven drying should be effected at 180° C during 30 minutes.

7. CLEANING:

Screens and squeegees and as well as other working materials can be cleaned with the RUCO Universal cleaner 32 335. If cleaning is not performed by fully automatic cleaning equipment, protective gloves must be worn.

Universal Cleaner	UR		32 335
Cleaner for cleaning equipment	WR	100 VR	1240C
Bio degradable Cleaner	BR	100 VR	1272

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 Technical Application Department.

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