

110ZM

Technical Data Sheet

Screen Printing Inks

1. APPLICATION FIELDS:

Two component ink for pad and screen printing on metal such as iron sheet and aluminium (other metals to be proved). 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 high glossy, physically drying and chemical reactive printing ink exhibits good mechanical and chemical resistance, as well as a good flexibility. The colour shades of 110ZM are light fast, weather resistant and guarantee high opacity. A special product test is recommended prior to production.

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:

3.1 Basic colours:

White	110ZM1056
Black	110ZM9038
Black (high opaque)	110ZM9039

3.2 Special Colours:

Special colours can be elaborated on request.

4. ADDITIONAL PRODUCTS:

The colour tone density can be reduced by the addition of transparent varnish.

Overprinting Lacquer	110ZM0086
Transparent Varnish (max. addition 10%)	110ZM0087

5. ADDITIVES:

5.1 Thinner:

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

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

5.2 Retarder:

Retarder will influence the drying time of the ink under different climate conditions. Retarder VZ 35928 is a medium drying retarder, VZ 34392 is a very slow drying retarder. 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 35928
Retarder, slow (addition max. 5 %)	VZ 34392

It must be noted that an excessive addition of retarder may negatively influence the ink transfer and bulk goods 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.

Special Retarder, very slow (addition max. 10%) 100VR1170

5.3 Hardener:

Hardener 100 VR 1431 is recommended in order to achieve a higher weather resistance as well as for the use of closed systems.

Hardener (add 10 %) 100VR1431

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 cross linking 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.

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 100VR133

110ZM

6. PROCESSING INSTRUCTIONS:

6.1 Cliché/Printing Equipment/Pad/ Screen:

The inks of series 110ZM can be used with all pad printing and screen printing machines with clichés,pads or screens (100 – 120 F/ cm) incurrently 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.

6.2 Curing Conditions:

At room temperatures (21 ° C) the inks of 110ZM 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.

7. CLEANING:

Clichés, squeegees and so on can be cleaned with the RUCO Universal cleaner 32335. 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

8. 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.

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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