

400 LMG SERIES

PRELIMINARY VERSION



Technical Data Sheet

Screen printing inks

1. APPLICATION FIELDS:

Versatile one or two component ink for screen printing in graphic market on ABS, acrylic glass, rigid PVC, lacquered surfaces, SAN, polyamide, polycarbonate, pre-treated polyethylene (PE) and polypropylene (PP) as well as polystyrene and PET/ PETG. 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 screen printing ink exhibits good mechanical and chemical resistance, as well as a good flexibility. The colour shades of 400 LMG 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:

The basic ink mixing system consists of 10 basic colours and may be used for the mixing of a wide colour shade range. Field proven mixing formulations exist for Pantone®, HKS, RAL, NCS, etc. (see 6.1).

Basic colours:

Light Yellow	M 1	400 LM 2015G
Medium Yellow	M 2	400 LM 2016G
Orange	M 3	400 LM 3029G
Light Red	M 5	400 LM 3030G
Red	M 6	400 LM 3031G
Violet	M 7	400 LM 5021G
Blue	M 8	400 LM 5022G
Green	M 91	400 LM 6031G
White	M 11	400 LM 1004G
Black	M 12	400 LM 9004G
Clear Base	M 0	400 LM 0003G

3.2 Special Products:

High Opacity Formulation:

White (high opacity) 400 LM 1005G

3.3 Euro-Colours /4-Colour Process Printing Inks:

For 4-colour process printing according to DIN 16538, 4 Euro-basic colours are available:

Euro-Yellow	400 LM 2014G
Euro-Magenta	400 LM 3028G
Euro-Cyan	400 LM 5020G
Halftone Black	400 LM 9003G

3.4 Bronze Colours:

Silver	400LM 4005G
Pale Gold	400 LM 4006G
Rich Gold	400 LM 4007G
Rich Pale Gold	400 LM 4008G

4. ADDITIONAL PRODUCTS:

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

Overprinting Lacquer	400 LM 0008G
Raster Paste (max. addition: 10 %)	400 LM 0006G
Elastifier base (max. addition: 10 %)	400 LM 0007G

5. ADDITIVES:

5.1 Thinner:

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

Thinner, standard (addition: 15 - 25 %) VD 100VR1279

Thinner, very fast (addition: 15 - 25 %) VD 100VR1185

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5.2 Retarder

Retarder will influence the drying time of the ink under different climate conditions.

Retarder, standard (add 5 – 10 %) VZ 100 VR 1322

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.

5.3 Adhesion Modifier:

The mixing addition is approx. 7 %. At room temperature of 20° C a pot life of approximately 12 hours can be achieved.

Hardener 100 VR 1420

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 100 VR 133

6. PROCESSING INSTRUCTIONS:

6.1 Stencils/Printing Equipment:

The inks of 400 LMG series can be printed with all commonly available screen printing meshes. They can be used with all screen printing machines for printing speeds of about 1.800 – 3.600 pieces/h with screen printing stencils currently used for industrial applications. The colour mixing formulations are based on a 120-34 threads/cm mesh.

6.2 Curing Conditions:

The inks of 400 LMG series are physically drying through the evaporation of solvent within 5 min. at 20° C. The finally drying will be achieved at 40 ° C during 15 seconds.

7. CLEANING:

Screens and squeegees and as well as other working materials can be cleaned with the RUCO screen 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	R 100 VR1240C
Bio degradable Cleaner	BR 100 VR 1272

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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