

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 400LMG series is **free** from **cyclohexanone** and **aromatic hydrocarbons**. The colour shades of 400LMG are light fast, weather resistant and guarantee high opacity.

A special product test is recommended prior to production.

Provided they are printed in a proper and professional way, the printing inks of series 400LMG can be applied to the non food contact surface of food packaging materials and articles.

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	400LM2015G
Medium Yellow	M 2	400LM2016G
Orange	M 3	400LM3029G
Light Red	M 5	400LM3030G
Red	M 6	400LM3031G
Violet	M 7	400LM5021G
Blue	M 8	400LM5022G
Green	M 9	400LM6013G

White	M 11	400LM1004G
Black	M 12	400LM9004G
Clear Base	M 0	400LM0003G

3.2 Special Products

High Opacity Formulation:

White (high opacity)	400LM1005G
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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	400LM2014G
Euro- Magenta	400LM3028G
Euro- Cyan	400LM5020G
Halftone Black	400LM9003G

3.4 Bronze Colours

Silver	400LM4005G
Pale Gold	400LM4006G
Rich Gold	400LM4007G
Rich Pale Gold	400LM4008G

4. ADDITIONAL PRODUCTS

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

Overprinting Lacquer	400LM0008G
Raster Paste (max. addition: 10 %)	400LM0006G
Elastifier base (max. addition: 10 %)	400LM0007G

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 38279
Thinner, very fast (addition: 15 - 25 %)	VD 37220

400LMG

5.2 Retarder

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

Retarder, standard (addition: 5 – 10 %) VZ 35928

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. 10 %. At room temperature of 20° C a pot life of approximately 10 hours can be achieved.

Hardener (addition: 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

6. PROCESSING INSTRUCTIONS

6.1 Stencils/Printing Equipment:

The inks of 400LMG 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 400LMG 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 32335. If cleaning is not performed by fully automatic cleaning equipment, protective gloves must be worn.

Universal Cleaner	UR 32335
Cleaner for cleaning equipment	R 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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