

INKTECH

INNOVATION IN INK

PACKAGING INK SPECIALISTS

MAGMA

SOLVENT-BASED INK SYSTEM

Technical Data Sheet

INKTECH Ltd

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Magma is a solvent-based flexographic ink system for reverse printing onto oven-grade PET films, designed for subsequent lamination. It is formulated for use in high-temperature oven and microwaveable flexible food packaging applications, operating at temperatures typically between 180C and 220C. High-temperature performance is dependent on substrate selection and, where applicable, the adhesive used. Performance may vary depending on the complete structure and processing conditions.

ADVANTAGES:

- Manufactured using the framework regulations from (EC) legislation No 1935/2004 (for articles intended to come into contact with food), (EC) No 2023/2006 (The GMP-good manufacturing practice), and (EC) No 2023/2006 (plastic materials and articles intended to come into contact with food stuffs).
- Excellent adhesion to the substrate.
- Designed for long press runs with minimal adjustments and press side maintenance giving excellent colour value with easy clean-up and re-solubility.
- The ink provides good rub and scuff resistance.
- Excellent colour value and gloss.
- Excellent tape adhesion.
- Excellent rheology.
- High Solids.
- Variable press speeds 50-250mpm.
- Excellent release and non-blocking.
- Low odour and solvent retention.
- Supplied in 20kg steel drums, barrels or IBC.

APPLICATION:

Recommended for surface treated polyethylene terephthalate (PET)($>12\mu\text{m}$) films, when reverse printed backed by white, or direct to the substrate. The substrates and laminate structures used must be approved for high-temperature applications and tested in unison with the printing ink and adhesive system, to achieve certification as non-migratory and suitable for the intended end use.

C.O.A requested at time of order can be supplied quoting specification requirements.

Magma inks are suitable for Flexographic presses equipped with all types of anilox rollers. Suitable for use with doctor blade or chambered systems.

DRYING:

Care must be taken to fully dry the ink with heat, as insufficient drying may lead to residual solvent, causing offset to the food contact side of the film, or lead to solvent migration into the food.

Reduced press speeds are recommended to help aid the drying of the ink.

PRESS HYGIENE:

The printer needs to take care not to cause contamination of the inks, and the importance of press hygiene (ink pumps, pipes, anilox, sleeves etc.) to avoid unsuitable materials being unintentionally added to the ink and thus carried forward to the print.

The printer may also need to review machine lubricants/cleaners etc. to make sure they are suitable for this application, just in case of accidental contamination.

FINISHED PRINT STORAGE:

Care should be taken to prevent invisible set-off. Reduced pressure in the reel, reduced storage/conversion time and suitable storage temperatures (ambient), must be strictly adhered to.

ADDITIVE REQUIREMENTS:

Usually not required except with some metallic films (see technical sales rep).

PLATES /CLICHÉ REQUIREMENTS:

Contact your supplier for recommendations of photopolymer suitability & solvent compatibility.

DILUTION:

Normal for flexo	3:1 Ethanol / Normal Propyl Acetate
Fast Thinner	3:1 Ethanol / Ethyl Acetate
Retarder	Methoxy Propanol / Ethoxy Propanol

HANDLING:

- Store inks and use them in a warm place during winter, at temperatures not below 15°C. If storage temperature is below 15°C, the ink may thicken a little. In this case bring inks back to room temperature before using.
- The Magma ink series is gel free.
- Please refer to the Safety data sheets (SDS) before using.
- Always use in well ventilated areas.
- All electrical equipment should be suitable for volatile solvent atmosphere.
- Keep inks in original containers to avoid contamination.
- Wear protective gloves, clothing and safety glasses.
- Stir well before use.
- Seal tight containers after use.
- Approximately 35% -45% solids but each product/blend will vary.
- Printing viscosity 20-28 sec Zahn #2.
- Suitable for fountain roller or chambered unit flexography.

STORAGE:

15°C ← → 30°C

- Shelf life is 12 months, when properly stored at temperatures between +15°C and +30°C.

CLEANING:

For cleaning, use Ethanol/ Acetate mix. If there is a possibility some may be mixed with press returns, make sure it is a food grade thinner. (TSDA3 or similar)

TECHNICAL ASSISTANCE:

- Our experienced laboratory technicians provide innovative technical solutions to ink developments and if necessary, will customise formulations to your specific requirements, ensuring the optimum outcome for you.
- The team also supply free pantone matching support if you require any colour please call/email and we will be happy to send a formulation for mixing.
- All colours are matched using the latest X-RITE PANTONE software and spectrophotometers.

WASTE DISPOSAL:

Care should be exercised in the disposal of printing ink waste. This should be carried out in accordance with local waste regulations. Refer also to SDS.

END-USE & RESPONSIBILITY:

The suitability of Magma inks for any specific end use depends on the complete printed and converted structure, including substrate, adhesive and laminate, and the conditions of use. It is the responsibility of the customer, usually via external specialist testing, to ensure that the final packaging structure complies with all relevant regulatory, migration and performance requirements for general and high temperature use. Appropriate testing of the finished structure is strongly recommended prior to commercial use.

Inks are not suitable for direct food contact. For more information about food contact status and product regulatory compliance please refer to our General Regulatory Statement.

CONTACTS:

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DISCLAIMER: March 2025. This information has been carefully compiled from experience gained in the laboratory and under commercial conditions. However, the product's performance and its suitability for the customer's purpose depend on the conditions of use and the material being printed. We recommend that customers satisfy themselves that each product meets their requirements in all respects before commencing a print run. Since we cannot anticipate or control the conditions under which our products are used it is not possible to guarantee their performance. All sales are subject to our standard terms and conditions of sale. We would point out that the information contained in this leaflet is only a recommendation and may need to be altered to suit the conditions and efficiency of the equipment employed. INKTECH's products are not designed for use in conjunction with those of any other ink maker or similar supplier unless agreed to in writing.