

## Marabu at K 2019

**K 2019 is opening its doors as the entire industry faces serious pressure: plastic must become more sustainable. At the world's leading trade fair for plastics and rubber, German ink manufacturer Marabu will be presenting products that open up entirely new possibilities.**

**Tamm, 18 July 2019** – Anyone intending to visit the 17 halls of K 2019 will probably be in need of a map: Marabu is located in hall 4 at stand C63-04, where it will be showcasing a portfolio of inks for screen, pad and digital printing that prioritise the safety of product manufacturers and consumers. These include low-migration screen and digital inks for food packaging, water-based pad and digital inks for printing children's toys, UV LED-curable inks, and smart solutions for the automotive industry.

### Low-migration UV-curable screen printing ink for PE/PP plastic food packaging



Inks for food packaging are subject to strict quality audits to verify that they are not susceptible to migration (i.e. the transfer of substances from the packaging material to the foodstuff). Marabu's *Ultra Pack UVFP* range is the first and only officially approved (by Swiss Quality Testing Services, SQTS, a certified institute) for migration-sensitive PE/PP plastics – the materials most widely used for packaging foodstuffs.

Moreover, the very high reactivity of *Ultra Pack UVFP* inks ensures rapid curing and printing speeds of up to 5,000 items per hour.

### UV LED curing for printing packaging



UV LED curing is proving increasingly popular when printing packaging. It only employs UVA-wavelength light for drying, and emits zero ozone. There is no need for an equipment warm-up period, ensuring highly efficient production. Additionally, the substrate is not subjected to high temperatures. Marabu has developed the *Ultra Pack LEDC* ink range specifically for the requirements of this use case. The *Ultra Pack LEDC* formula is ideal for a broad variety of plastics

and supports both conventional UV curing and complete LED-based curing. This guarantees a flexible printing process.

### Direct digital printing of PET bottles

Marabu's UV-curable inkjet products can be employed in a variety of situations, and are compatible with all common print heads. The portfolio includes the *Ultra Jet DUV-C* line for directly printing PET packaging, including bottles and tubes, by means of an industrial single-pass method. PET bottles often come into contact with foodstuffs, so it is important that low-migration inks are used. The *Ultra Jet DUV-C* range has been tested and confirmed to display minimal migration. Moreover, this portfolio of UV products is suitable for de-inking. In other words, *Ultra Jet DUV-C* inks can be removed from PET bottles when they are recycled. Until recently, de-inking was primarily used for recycling paper.

## Water-based digital printing for flexible food packaging



Flexible food packaging adapts to the shape of the product it contains, is easy to modify, user-friendly and saves on input material. Marabu offers a new water-based inkjet ink for directly printing flexible packaging materials. The formula complies with the requirements of the EuPIA Swiss Ordinance on Food Contact Materials and Articles and the Nestlé Guidance Note on Packaging Inks, i.e. confirming its suitability for food packaging. The new ink is also ideal for multi-layer

packaging, and for lamination and heat sealing. It is available exclusively for machine manufacturers and system integrators.

## New water-based pad and digital printing inks for toys



Product safety is an absolute must when it comes to children's toys. This holds true for both manufacturers and their young consumers. At K 2019, Marabu will be presenting Maqua® Pad MAP, the world's first commercially available water-based pad printing ink. This range is perfect for adding decorative elements, and for sensitive applications, such as children's toys. Maqua® Pad MAP produces outstanding results in terms of adhesion, opacity and durability, on substrates including coated and uncoated wood, ABS, PVC, PC and pre-treated polypropylene (PP). The water-based formulation is odourless, is manufactured without the use of BPA or BPS chemicals, and has very low VOC and low PAH levels.

Switching to water-based pad printing requires careful preparation. Key considerations include the correct room temperature, humidity, printers, pad hardness, cliché type, and limited use of auxiliary agents. Marabu's water-based inkjet inks offer the benefits of digital printing, and are employed, in particular, for the personalisation/customisation of plastic toy parts. These inks can be deployed with all leading industrial print heads (e.g. Konika Minolta, Kyocera and Dimatix). Both the water-based pad and digital printing ranges have been officially confirmed to comply with the DIN EN 71-3 standard for toy safety, and are suitable for applications in line with the 2009/48/EC Toy Safety Directive.

## Flexible pad printing inks for diverse applications

Marabu's Tampa® Tex TPX offers very high adhesion and high opacity in conjunction with a flexible ink film. As numerous test prints and quality checks have now demonstrated, this best-selling pad printing ink for textiles is also ideal for other, highly challenging tasks. The extremely carefully sourced, high-purity raw materials not only comply with the strict specifications of clothing manufacturers, such as Adidas A01 und Nike RSL, they also fulfil requirements for baby products, toys and packaging. As a result, Tampa® Tex TPX is no longer restricted to prints on T-shirts, shoes and similar items. It is also perfect for other sensitive products, such as babies' bottles, dummies (pacifiers), toys, and packaging for personal care products.

## Smart printing solutions for the automotive industry

Mara® Mold MPC is a solvent-based screen printing ink for film-insert-moulded (FIM) plastic parts – in particular, those found in the automotive industry. The desired decorations are printed on the reverse of polycarbonate films and then coated with PC or PC/ABS during the FIM process.

Mara® Mold MPC offers excellent mouldability and high temperature resistance in conjunction with very good adhesion to injection-moulded substrates.

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Marabu's Mara® Poly P offering is ideal for aluminium trim, door sill plates and glossy logo badges. It can be combined with Mara® Pur PU to ensure high durability on aluminium parts. A dual-cure screen printing varnish rounds out the portfolio for automotive applications. Mara® Cure HY screen printing varnish delivers the desired surface effect – for both matte and high-gloss finishes.

When it comes to personalising or customising plastic parts, digital printing offers substantial advantages over screen printing. The UV-curable Ultra Jet DUV-MF was developed with wide-format graphical applications in mind. It is a highly versatile ink suitable for multiple scenarios, including printing rigid substrates, such as pre-moulded automotive components. Ultra Jet DUV-MF is also available in a LED-curable version.

### Specialty ink for decorating front panels



The latest household appliances are equipped with state-of-the-art front panels and integrated touch panels. Marabu's Mara® Panel MPA, a new range of specialty decorative inks, features an outstanding opaque white, plus a deep, non-conductive black developed for printing on the back (second surface) of popular PMMA or PC plastics. Mara® Panel MPA displays very high electrical resistance to avoid interference with the input system's functionality. Furthermore, the range

has been tested for resistance to water vapour and to common cleaning agents from leading manufacturers. In many cases, household appliances feature plastic panels within a metal housing. Marabu offers solutions for the entire device, even if individual components are made from differing materials, i.e. plastic, metal or glass.

### Combined printing techniques for operator control panels

Marabu offers a combined solution for operator control panels, comprising both screen and digital processes. The PET material employed to make membrane keyboards is decorated via digital printing in conjunction with Ultra Jet DUV-A, an ink system that is compatible with screen printing methods. Benefits include shorter printer set-up times, cost-effective production of very small print runs, and customised designs for individual membrane keyboards within a single print job. The blocking layer is subsequently screen printed. There is a choice of inks available for this task, such as the solvent-based Mara® Switch MSW system with an effective opaque white, black and block-out silver or, where required, the UV-curable Ultra Switch UVSW line.

### New UV-curable solution for credit cards

ID and cashless payment cards are gaining ground in the global electronic user-authentication market. Marabu's new Ultra Card UVCC screen printing ink cures quickly, is suitable for lamination, and is ideal for printing on coated or uncoated PVC and PLA films (PLA = polylactide, a bioplastic i.e. bio-based polymer). Furthermore, the ink is excellent for embossing and it can also be easily combined with other printing methods – while offering all the advantages of UV-curable technology.

## Marabu GmbH & Co. KG



Marabu is a leading global manufacturer of liquid coatings and screen, digital, and pad inks with headquarters near Stuttgart, Germany. Marabu's track record of innovation stretches back to 1859, featuring many industry-first solutions for both industrial applications and graphic design. With its 16

subsidiaries and exclusive distribution partners, Marabu offers high-quality products and customer-specific services in more than 90 countries. Exceptional technical support, hands-on customer training, and environmental protection are core elements of its corporate philosophy. Sustainable business practices are also key to Marabu's vision. These have been implemented through a number of initiatives, with concrete results – and the company is committed to maintaining this course of action in future. Marabu has been certified to ISO 9001, ISO 14001 and OHSAS 18001.