

The world's first commercially available water-based pad printing ink



Pad printing has long been dominated by solvent-based inks. Now there is another option. Ink manufacturer Marabu, based in south-west Germany, has achieved a world first: It has successfully developed and launched water-based inks for pad printing.

The range is a wish come true for printers who employ the pad process but would prefer eco-friendlier and nearly odour-free alternative inks. In particular, Maqua® Pad MAP is ideal for decorations that must meet exceptionally strict safety standards – for instance, in the children's toy industry. Recent tests indicate that the inks are also suitable for textile printing.

What makes Maqua® Pad MAP water-based pad printing inks so special?



Industry players are placing ever-greater emphasis on the environment and sustainability – including the more targeted and careful use of resources. At the same time, there is a growing focus on safety. Particularly when it comes to sensitive applications, requirements and standards are constantly being reviewed and updated. Toy manufacturers, for example, are now subject to stringent criteria for product decoration, such as the Toy Safety Directive 2009/48/EC (DIN EN 71/3).

Marabu has extensive experience of working with manufacturers of sensitive products. The company understands their challenges and develops inks that comply with their strict and specific requirements, and seeks eco-friendly alternatives. Against this backdrop, Marabu developed its new Maqua® Pad MAP water-based pad printing range of inks. Dr Wolfgang Nowotny, Technical Project Manager for the Sensitive Products Segment, Screen and Pad Printing Inks, is very proud of this achievement. "With Maqua® Pad MAP, we have successfully created an innovative ink range that can be used for diverse applications involving sensitive products. The water-based pad printing inks can, for instance, be employed for baby and toddler products and children's toys, as well as for the textile industry. A key strength of Maqua® Pad MAP is that it is almost odour-free, and so is very pleasant to work with." As a result, there are fewer workplace safety constraints for Maqua® Pad MAP. The solvent content of the ink is very low (under 10%); therefore, it also has a very low VOC (volatile organic compound) content. What's more, it complies with the DIN EN 71/3 standard for toy safety, has very low PAH levels, and is free from BPA/BPS.

Properties and applications of water-based pad printing inks

The new product range can be used in a wide variety of scenarios. When it comes to decorative elements on toys, Maqua® Pad MAP is suitable for printing on painted and unpainted wood, ABS, PVC and PC. It can also be used on suitably pre-treated PP and coated substrates. The new pad printing ink range is a press-ready, single-component system. It can be diluted with Retarder WV1 where required. A further benefit of Maqua® Pad MAP is its cost-efficiency: The inks are not limited by pot life, meaning the product can be used in its entirety, avoiding waste in most cases.

Moreover, Marabu is exploring further use cases for the product. The ink manufacturer is currently conducting wide-ranging and promising tests on all kinds of textiles – with the aim of soon offering textile companies, too, a genuine alternative to conventional solvent-based pad printing inks.

Children delight in eye-catching decorative details



Kids' eyes light right up when they see bold colours. After all, the world would simply not be the same in black and white. With this in mind, toy manufacturers have long used bright hues to decorate their goods, from mobiles to figurines, and from train sets to sports gear. The new Maqua® Pad MAP water-based pad printing inks open up nearly limitless opportunities for decoration. The inks are available in satin-gloss and high-opacity colours. PANTONE®, HKS® and RAL mixing formulas will soon be available in the Marabu ColorManger. The inks are user-friendly and easy to

process. Once dry, the film's high resistance contributes to robust, long-lasting toy surfaces. These properties also make Maqua® Pad MAP of interest to manufacturers who are looking for an alternative to water-based spray and brush inks.

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 14 subsidiaries and exclusive distribution partners, Marabu offers high-quality products and customer-specific services in more than 80 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 since 1995 and to ISO 14001 since 2003.