

Marabu at Glasstec – vibrant colours, powerful adhesion

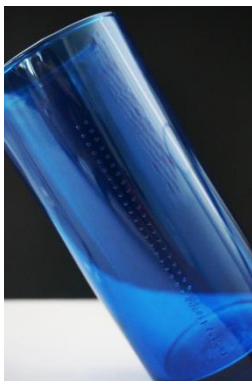
At Glasstec 2016, Marabu will be showcasing a range of screen printing, pad printing and digital printing solutions for the glass industry. Highlights will include decorated glassware with visual and tactile effects. Screen printing and special, UV-curable coatings produce out-of-the-ordinary designs.



Tamm, Germany, 30 June 2016 – Marabu will unveil two exciting innovations at this year's Glasstec trade fair in Düsseldorf (hall 12, stand B25): The Ultra Glass UVGL range of inks creates a silvery sheen that turns drinking glasses, bottles and flat glass into real eye-catchers. The second new development is a highly impressive thick-film or tactile coating. When used to decorate drinking glasses, this special coating turns them into something unique and distinctive, with tactile effects. Other Marabu highlights at Glasstec will include high-gloss metal effects created by hot stamping in conjunction with Ultra Glass UVGL primers, plus a new basis top coat for in-line foiling.

UV ink for glass – high-gloss silver creates an opulent look and feel

Until now, the glass industry has obtained high-gloss gold and silver effects using ceramic inks. However, these are expensive, and the baking process often generates high energy costs. In Düsseldorf, Marabu will present a very promising alternative – a high-gloss silver from its Ultra Glass UVGL range. This print-ready product is coated with a high-transparency, silicone-free UVGL-WV base coat. The silver ink further expands the range's broad colour spectrum, and lends an exclusive look and feel to container glass, such as drinking glasses, bottles and flasks, and to flat-glass products such as mirrors or cupboard doors. In short, it opens up a wealth of possibilities for glass manufacturers. And, in addition to applying a higher sheen to glass products, it protects them from abrasion. In a stress test in an industrial dishwasher, the finish sustained no damage after 1,500 wash cycles, and was graded "very good". High-gloss UVGL silver is particularly valuable in screen printing, as it has many applications and is economical to use.



Tactile printing with thick-film coatings – a real hit for beer and wine glasses

The UVGL ink range's two-component system is versatile and gives rise to strong tactile effects. Designs are pre-applied to container or flat glass by screen printing, then exactly overprinted with a thick-film coating and cured with UV light. The ratio between the two components can be tailored to the specific needs of the design (e.g. 50:50, 70:30, 60:40), giving customers all the flexibility they require. There are two basic alternatives. Firstly, a highly viscous transparent coating recipe with tailored rheological properties can be used for very fine, high-build

details in a design. Secondly, a low-viscosity transparent recipe is suitable for more extensive sections of a design, e.g. wide lettering. This is beneficial in the high-volume production of premium goods. Marabu guarantees consistently outstanding quality in production printing.

Elegant designs for luxury packaging – cold-foil transfer with UV base coat

Cold-foil transfer, also known as in-line foiling, is a recent innovation and a genuine alternative to traditional finishing processes. Transferring a high-gloss foil to container glass prepares the substrate for the application of Marabu's decorative top coatings, available in many shades. In the second (in-line) process step, top coatings are applied by UV screen printing. The result is sparkling metallic finishes in exceptionally vibrant colours. This method makes it possible to realistically mimic gleaming metal, the reflective surface of water, or the reflections created by glass. When the standard silver foil is overprinted with the brilliant UVGL-WV basis top coat, virtually any shade can be achieved by adding coloured ink.

Glossy gold and silver effects – hot stamping with UV inks



Hot stamping remains extremely popular. At this year's Glasstec, Marabu will showcase some of the dazzling effects it can create in combination with UV inks. The required image or text is screen-printed onto the glass surface with Ultra Glass UVGL primer, serving as a type of cliché for the hot foil. The foil is transferred onto the pre-printed ink film, either through roll-on stamping or vertical stamping – the foil only adheres to the areas that were primed with UVGL. The result is a high-gloss gold and silver finish.

Screen printing inks for touch user interfaces and automotive industry applications

On many devices, membrane switches are increasingly being replaced by glass touch panels. The combination of electronics with state-of-the-art glass products results in durable surfaces that are easy to keep clean – making them suitable for medical equipment and building-control systems, for example. UV-curable, solvent-based inks such as Marabu's Ultra Glass UVGL and Mara® Glass MGL are ideal for printing on touch panels. These highly adhesive screen printing inks feature high resistance to alcohol, extreme temperatures and chemicals.

Organic inks are playing an increasingly important role in the automotive industry. A notable use for screen printing is for applying PVB interlayers onto laminated safety glass.

Solvent-based screen printing and pad printing inks for glass



The glass industry is trending toward UV inks, but solvent-based inks are often an appealing option, especially for graphics requiring only a single colour. And no additional UV equipment is needed. At Glasstec, Marabu will present its Mara® Glass MGL solvent-based screen printing ink and the new Tampa® Glass TPGL pad printing ink. MGL is ideal for high-gloss results on flat glass. Durable TPGL ink is suitable for a variety of tasks, and performs especially well on rounded objects such as small glass jars for cosmetics. Both MGL ink for screen printing and TPGL ink for pad printing adhere well to a wide variety of substrates, and ensure brilliant precise colours. These inks were developed in line with the latest standards, and according to strict EU directives and hazardous materials requirements.

Digital printing with liquid coatings creates special effects on glass



At Glasstec 2016, Marabu will be presenting the numerous possible applications of digital direct UV printing – with a clear focus on customisable digital printing on glass. Glass substrates can be prepared for roller-coating of customised designs with the Mara® Shield UV-PGL primer. This primer enables standard UV digital printing inks to adhere to glass. Because no special glass inks are required, manufacturers enjoy total flexibility in their choice of design. Finishes with a unique sheen can be achieved using a white blocking layer. This is applied by the same coating method with a high-coverage Mara® Shield UV-CGL white. The process guarantees excellent opacity and a completely even blocking layer.

In addition, Mara® Shield UV-CGL inks can be used for full coverage of glass surfaces with the help of liquid coatings. A wide variety of finishes and special effects (metallic inks, interference inks) can be achieved. The ability to produce custom colours makes this application highly attractive to kitchen and furniture component suppliers. They benefit from the huge range of shades, and the possibility of letting customers select any colour – from the Pantone, RAL or HKS systems, for example.

Digital UV printing brings mass customisation to glass manufacturing

Flatbed printers can be employed to custom-decorate container and flat glass. Industrial-scale applications, in particular, benefit from second-surface printing – for example in the manufacture of input devices. In this context, there is a growing trend to combine screen and digital printing. The advantages include significant time savings in print preparation, a reduction in process steps, far lower consumption of materials such as screens, greater flexibility, and customisation in the printing process.

Digital printing is clearly gaining traction in the manufacturing sector, with applications including the decoration of beverage bottles. In future, it will be possible to print up to 36,000 bottles per hour using an in-line method, with a different design on each bottle (e.g. in various languages, with modifications to the design, or with sequential numbering). Other applications are found in the advertising materials industry (e.g. container glass) and interior design (e.g. kitchens and furniture). Flexible digital printing offers manufacturers unlimited possibilities, and supports the adoption of new, innovative technologies.

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.