Braille Varnishes

UVLB 1 and UVRS 912 for rotary screen printing
UVLB 2 for flat bed screen printing

UV - curable braille varnishes for paper, cardboard, and pasteboard, Corona pre-treated or top-coated polyethylene (PE) and polypropylene (PP) foils, top-coated polyester PET foils, PVC and paper labels

High ink built-up, high gloss, fast curing, high transparency, flexible ink film, good chemical resistance

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Field of Application

Substrates

All three UV-curable braille varnishes are best suited for the following substrates:

- Paper, cardboard, pasteboard
- PE, PP self-adhesive foils, Corona pre-treated or top-coated
- polyester PET foils, top-coated
- PVC, paper labels

Since the print substrates mentioned may be different in printability, due to lower surface tensions even within an individual type, preliminary trials are essential to determine suitability for the intended use.

For PE and PP foils, we generally recommend high-frequency Corona pre-treatment to increase the surface tension to at least 42-44 mN/m.
PP foils should exhibit surface tensions of at least 48 mN/m after high-frequency Corona pre-treatment for optimum wetting and adhesion of the UV screen printing ink.

Field of use

Both the Screen Printing Varnishes UVLB 1 and UVLB 2 are suited for braille applications onto printed labels or further packaging materials, as an alternative to embossed or sprayed products.

The Overprint Varnish UVRS 912 has a better flow and is therefore excellently suited for the printing of tactile danger warnings.

Characteristics

Varnish characteristics

In regard of viscosity and rheology, all the varnishes are press-ready, high-gloss and flexible.

- very high ink built-up and stable ink film thickness
- excellent acuity
- flexible ink film
- high transparency
- highly reactive adjustment

Adjustment

Both the Braille Varnishes UVLB 1 and UVLB 2 as well as the Overprint Varnish UVRS 912 are press-ready, please stir well before printing.
The varnishes exhibit a wide application field on different printing machines but can also be modified in its reactivity and viscosity by using additives if required. For more details, please see chapter "Additives and Auxiliaries".

Curing

The UVLB 1 and UVLB 2 Varnishes are highly reactive and have very fast curing properties.
A UV drying unit with one or two medium pressure mercury vapour lamps (150-200 W/cm power) cures the varnishes at a belt speed of 15-50 m/min.

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Generally, the hardening speed of the ink depends on the type of UV dryer (reflector), number, age and capacity of the UV tubes, printed ink film thickness, colour shade, substrate, and belt speed of the UV dryer.
The ink film should pass a tape test after exiting the curing unit and cooled to room temperature.

UVLB 1, UVLB 2, and UVRS 912 achieve their maximum chemical and physical resistance after 24 h due to the given post-curing process of radically curing UV printing inks.

Stress resistance
After proper and thorough drying, the ink film exhibits outstanding adhesion as well as rub, scratch, and block resistance, and is highly resistant to solvents, alcohol, finger sweat, water, and other usual fillers.

Fabrics and possible ink application
UVLB1 is best suited for rotary screen printing fabrics such as Gallus Screeny® Type BZ and Stork Screens Rotamesh® RM 75 with 40% open area. Ink layer thicknesses of 150-220 µm are possible to print.

UVLB 2 is suitable for flat bed screen printing. Fabrics of 32-70 to 40-80 threads/ cm can here be used.
By using the corresponding stencil technology (EOM 160-190 µm), ink layer thicknesses of 150-220 µm max. can be printed.

Range

Braille applications
UVLB 1	Braille Varnish for rotary screen printing
UVLB 2	Braille Varnish for flat bed screen printing

Tactile danger warnings
UVRS 912	Relief Varnish for rotary screen printing
UVLB 2	Braille Varnish for flat bed screen printing

Auxiliaries

UVV 3 Thinner
UVLB1 and UVLB2 are press-ready but, if necessary, 1-3% Thinner UVV 3 can be added to the ink. The viscosity of the ink, however, is strongly influencing the thickness of the cured ink film.

Cleaning

For manual cleaning of screen printing stencils, our Cleaners UR 3 (flame point 42°C) or UR 4 (flame point 52°C) can be used.

Shelf life

Shelf life depends very much on the formula/ reactivity of the ink system as well as the storage temperature. It is one year max. for an unopened ink can if stored in a dark room at a temperature of 15 to 25 °C.

Under different conditions (particularly higher storage temperatures), shelf life will be reduced. In such cases, the warranty given by Marabu expires.

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Labelling

For the Braille Varnishes UVLB 1, UVLB 2, as well as UVRS 912 and their auxiliaries, there are current Material Safety Data Sheets according to EC-regulation 91/155, covering in detail all relevant safety data including the labelling according to the present EC regulations as to health and safety labelling requirements.

Such health and safety data may also be obtained from the respective label.

Safety Regulations

We recommend that UV screen printing inks and auxiliaries should be handled with particular care. Follow the instructions given on the labels and in the Material Safety Data Sheets.

Note

Our technical advice whether spoken, written, or through test trials corresponds to our current knowledge to inform about our products and their use. This is not meant as an assurance for certain properties of the products nor their suitability for each application. You are, therefore, obliged to conduct your own tests with our supplied products to confirm their suitability for the desired process or purpose. The selection and testing of the ink for specific application is exclusively your responsibility. Should, however, any liability claims arise, such claims shall be limited to the value of the goods delivered by us and utilised by you with respect to any and all damages not caused intentionally or by gross negligence.

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