

Marking ink SD 2593 UV

The marking ink **SD 2593 UV** is used for marking purposes in assembly, control and service, e.g. for printing letters, figures, symbols, surfaces and lines (barcodes).

- Application by screen printing
- excellent definition
- excellent covering power
- short curing times
- good resistance to solder baths
- very good adhesion on copper, base materials and solder resists (tape test acc. to IPC-TM-650, 2.4.28.1 no tear-off)
- high colour stability

Characteristics

| | SD 2593 UV |
|--|-------------------------------|
| Colour/appearance | white |
| Solids content | 100 % |
| Viscosity* at 20 °C [68 °F] DIN EN ISO 3219 | 14 500 ± 1 500 mPas |
| Density at 20 °C [68 °F] DIN EN ISO 2811-1 | 1.48 ± 0.05 g/cm ³ |

* measured with Haake RS 600, C 20/1°, D = 50 s⁻¹,
viscosity measuring unit supplied by Thermo Fisher Scientific, www.thermofisher.com

Indices: SD = screen printing, UV = UV curing

Processing



Please read this technical report and the publications listed below carefully before using the product. These sheets are enclosed with the first shipment of product or sample.

MSDS

The corresponding material safety data sheet contains detailed information and characteristics on safety precautions, environmental protection, transport, storage, handling and waste disposal.

TI

[Technical information TI 15/3](#) "Protective measures when using chemicals including lacquers, casting compounds, thinners, cleaning agents"

The marking ink **SD 2593 UV** is applied by screen printing. As UV curing inks do not contain solvents, they do not dry on the screens. However, direct UV radiation (from sunlight or fluorescent lamps) may lead to partial hardening of the ink. Therefore, the use of yellow light or yellow filters/UV protective films is necessary.



Protect from UV light



Stir before use

Since the many different permutations make it impossible to evaluate the whole spectrum (parameters, reactions with materials used, chemical processes and machines) of processes and subsequent processes in all their variations, the parameters we recommend are to be viewed as guidelines only that were determined in laboratory conditions. We advise you to determine the exact process limitations within your production environment, in particular as regards compatibility with your specific follow-up processes, in order to ensure a stable fabrication process and products of the highest possible quality.

The specified product data is based upon standard processing conditions/test conditions of the mentioned norms and must be verified if necessary while observing suitable test conditions on processed products.

Feel free to contact our application technology department (ATD) if you have any questions or for a consultation

Viscosity adjustment

SD 2593 UV is adjusted in such a manner that it can normally be processed in the condition supplied. To reduce its viscosity for processing purposes,

DIL dilute with 2 % max. of **VR 5006**

As the reactive thinner **VR 5006** participates in the curing process it is not possible to use any other thinner or solvent.

Auxiliary products recommended

- [Anti-static spray HP 5500](#)
prevents and eliminates electrostatic discharge occurring during screen printing; silicone- and grease-free
- [Cleaning agent R 5899](#)
for screen washing equipment, simply and safely to handle, no labelling in accordance with the German dangerous goods regulations required, extremely high flash point (> 100 °C [> 212 °F]), low vapour pressure < 0.1 hPa at 20 °C [68 °F], thus not affected by the EU-VOC regulation 1999/13/CE
- [Cleaning agent R 5821](#)
for the cleaning of equipment and work tools, high flash point (+32 °C [89.6 °F])
- [Cleaning agent R 5817](#)
for the manual cleaning of screens and tools

Screen printing

→ Ensure that the surface to be coated is clean, dry and grease-/oxide-free.

Screen printing parameters recommended

| | |
|-------------------|---|
| Screen fabric | Polyester 100-37 to 140-34 (old nomenclature: 100-140 T) or corresponding steel fabric |
| Screen tension | at least 25 N/cm or as specified by the screen mesh manufacturer |
| Snap-off | as low as possible |
| Squeegee hardness | 75-80 Shore-A, right angled |
| Squeegee angle | 75-80 ° |

Drying/curing

The marking ink **SD 2593 UV** is cured under the influence of UV radiation. High-pressure mercury vapour lamps with a power consumption of 80-100 Watt/cm ar length are suitable for this purpose.

→ Cure the marking ink **SD 2593 UV** with a UV light energy of approx.
2000-4500 mJ/cm².

The indicated light energy was measured with a Beltron* UV integrator. Equipment of other manufacturers may show different values.

→ Replace the UV burners regularly according to the manufacturer's instructions as the emission spectrum of the burners changes in the course of their life span.

→ Install operating time counters to be able to control the life span.

* Beltron GmbH, www.beltron.de, info@beltron.de

Packaging

The packing units available are indicated in our offer which we will send you upon request.

Shelf-life and storage conditions



Shelf life: In sealed original containers at least 6 months



Storage conditions: +5 °C to +25 °C [+41 °F to +77 °F]



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For warehousing reasons, isolated cases may occur where the shelf life upon shipment is less than the shelf life indicated in this technical report. However, it is ensured that our products have **at least** two-thirds of their shelf life remaining when they leave our company. Labels on containers show shelf life and storage conditions.

Disclaimer

All descriptions and images of our goods and products contained in our technical literature, catalogues, flyers, circular letters, advertisements, price lists, websites, data sheets and brochures, and in particular the information given in this literature are non-binding unless expressly stated otherwise in the Agreement. This shall also include the property rights of third parties if applicable.

The products are exclusively intended for the applications indicated in the corresponding technical data sheets. The advisory service does not exempt you from performing your own assessments, in particular as regards their suitability for the applications intended. The application, use and processing of our products and of the products manufactured by you based on the advice given by our Application Technology Department are beyond our control and thus entirely your responsibility. The sale of our products is effected in accordance with our current terms of sale and delivery.

Any questions? We would be pleased to offer you advice and assistance in solving your problems. Samples and technical literature are available upon request.

Lackwerke Peters GmbH & Co. KG
Hooghe Weg 13, 47906 Kempen, Germany

Internet: www.peters.de
E-Mail: peters@peters.de

Phone +49 2152 2009-0
Fax +49 2152 2009-70

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