

PD PROCESS
 DATA SHEET

2-pack solder resist

ELPEMER[®] SD 2467 SM-DG



- application by screen printing; also suitable for vertical double-sided screen printing
- photoimageable
- aqueous-alkaline developable

Indices: **SD = screen printing**
 SM = silk-mat
 DG = dark-green

ELPEMER[®] = registered trademark of Lackwerke Peters GmbH + Co KG

→ Please read this process data sheet, the corresponding material safety data sheet, the application information sheet AI 2/1 and the general Technical Report on our 2-pack solder resists of the series **ELPEMER[®] 2467** carefully before using the product.

Characteristics

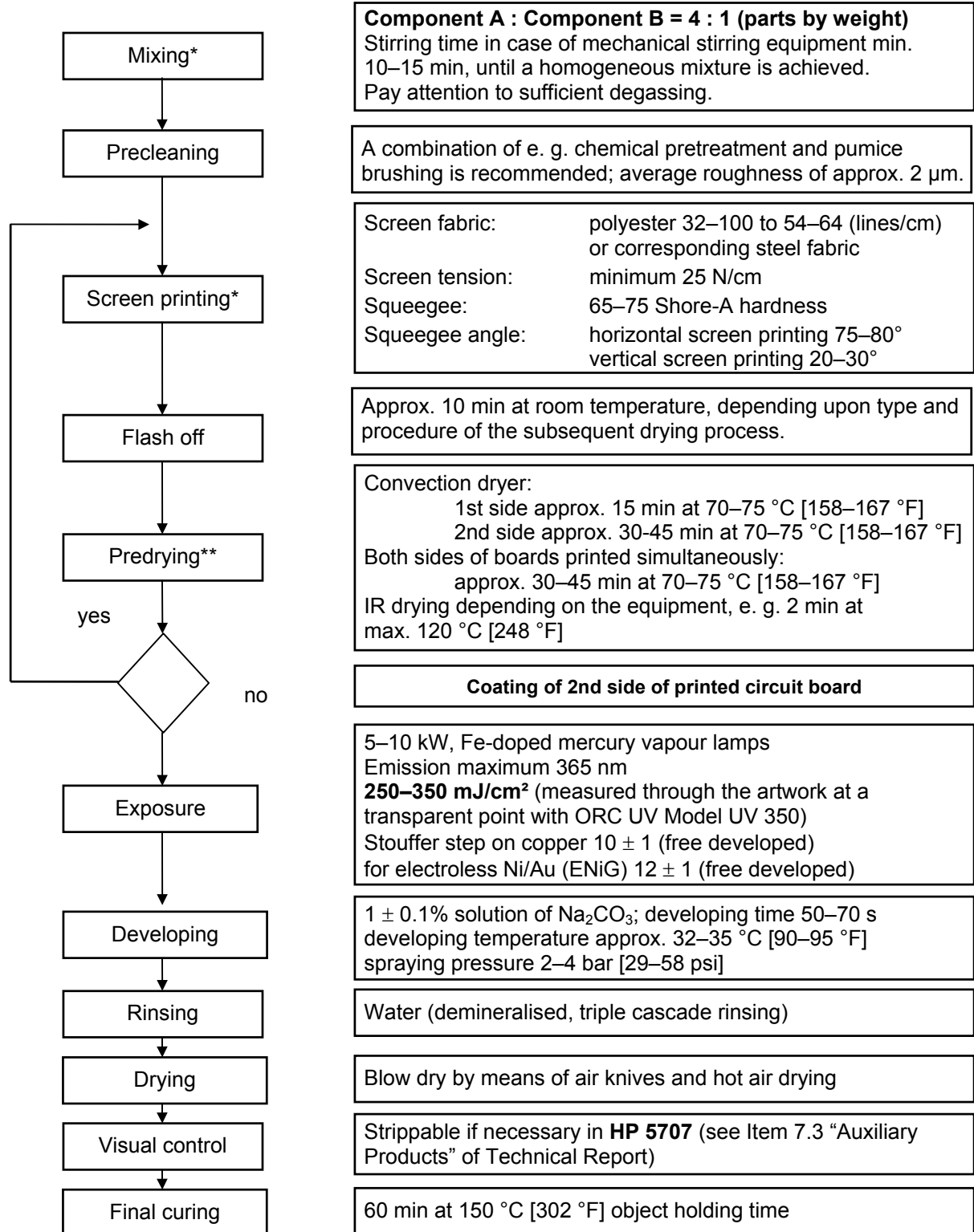
Base	novolak-epoxy-photopolymer
Solids content ISO 3251 (1 h, 125 °C [257 °F], 1 g weighed quantity)	76 ± 2 % by weight
Viscosity of mixture at 20 °C [68 °F] ISO 3219	20,000 ± 3,000 mPas
Density at 20 °C [68 °F], ISO 2811-1 Component A Component B mixture	1.36 ± 0.05 g/cm ³ 1.13 ± 0.05 g/cm ³ 1.31 ± 0.05 g/cm ³
Pot life of mixture (at room temperature; approx. 18–23 °C [64.4–73.4 °F]; avoid solar and light radiation, yellow light or yellow filters are mandatory)	at least 3 days
Residual halogen content JPCA-ES01-2003 / IEC 61249-2-21	halogen-free

* measured with Haake RS 600, C 20/1°, D = 50 s⁻¹, viscosity measuring unit supplied by: Thermo Electron (Karlsruhe) GmbH (formerly Haake-Messtechnik GmbH + Co) Dieselstraße 4, 76227 Karlsruhe, Germany Phone +49 (0) 721 - 40 94 - 0; Fax +49 (0) 721 - 40 94 - 300 www.thermo.com



Recommendation for standard processing of ELPEMER® SD 2467 SM-DG

Detailed recommendations on each process step can be found in our **Application Information AI 2/1**. Our **Application Technology Department (ATD)** will also be pleased to assist you regarding all process relevant queries.



Component A : Component B = 4 : 1 (parts by weight)
 Stirring time in case of mechanical stirring equipment min. 10–15 min, until a homogeneous mixture is achieved.
 Pay attention to sufficient degassing.

A combination of e. g. chemical pretreatment and pumice brushing is recommended; average roughness of approx. 2 µm.

Screen fabric: polyester 32–100 to 54–64 (lines/cm) or corresponding steel fabric
 Screen tension: minimum 25 N/cm
 Squeegee: 65–75 Shore-A hardness
 Squeegee angle: horizontal screen printing 75–80°
 vertical screen printing 20–30°

Approx. 10 min at room temperature, depending upon type and procedure of the subsequent drying process.

Convection dryer:
 1st side approx. 15 min at 70–75 °C [158–167 °F]
 2nd side approx. 30–45 min at 70–75 °C [158–167 °F]
 Both sides of boards printed simultaneously:
 approx. 30–45 min at 70–75 °C [158–167 °F]
 IR drying depending on the equipment, e. g. 2 min at max. 120 °C [248 °F]

Coating of 2nd side of printed circuit board

5–10 kW, Fe-doped mercury vapour lamps
 Emission maximum 365 nm
250–350 mJ/cm² (measured through the artwork at a transparent point with ORC UV Model UV 350)
 Stouffer step on copper 10 ± 1 (free developed)
 for electroless Ni/Au (ENiG) 12 ± 1 (free developed)

1 ± 0.1% solution of Na₂CO₃; developing time 50–70 s
 developing temperature approx. 32–35 °C [90–95 °F]
 spraying pressure 2–4 bar [29–58 psi]

Water (demineralised, triple cascade rinsing)

Blow dry by means of air knives and hot air drying

Strippable if necessary in **HP 5707** (see Item 7.3 “Auxiliary Products” of Technical Report)

60 min at 150 °C [302 °F] object holding time

* The 2-pack solder resists of the series **ELPEMER SD 2467** are adjusted in such a manner that they can normally be processed in the condition supplied. If necessary, the viscosity can be reduced for processing purposes by adding thinner **V 2467-SD**.

** Total holding time in subsequent process steps max. 72 h at < 25 °C [77 °F]

Shelf life and storage conditions

Labels on containers show shelf life and storage conditions.



Shelf life: In sealed original containers at least 9 months



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



Protect open containers from UV light

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.

Any questions?

We would be pleased to offer you advice and assistance in solving your problems. Free samples and technical literature are available upon request.

The above information as well as advice given by our Application Technology Department whether in verbal or written form or during product evaluations is provided to the best of our knowledge, but must be regarded as non-binding recommendations, also with respect to possible third-party proprietary rights.

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 of our material safety data sheets and technical information sheets, and of our products 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.

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