

Etch resist SD 2052 AL

The etch resist **SD 2052 AL** is applied as a positive print and is resistant to alkaline etching baths up to pH 9.

- High definition application by screen printing
- enables the representation of fine conductors
- excellent adhesion and high surface hardness
- alkaline strippable

Characteristics

Colour/appearance	blue
Solids content, DIN EN ISO 3251 1 h, 125 °C [257 °F], 1 g weighed quantity	71 ± 2 % by weight
Viscosity* at 20 °C [68°F] DIN EN ISO 3219	18 000 ± 3 000 mPas
Density at 20 °C [68°F] DIN EN ISO 2811-1	1.45 ± 0.05 g/cm³

* measured with Haake RS 600, C 20/1°, D = 100 s⁻¹, viscosity measuring unit supplied by Thermo Fisher Scientific, www.thermofisher.com

Indices: SD = screen printing, AL = alkaline strippable

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"

TI

[Technical information TI 15/13](#) "Precleaning in the pcb fabrication process"

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.

Safety recommendations

- When using chemicals, the common precautions should be carefully noted.
- Ensure that extractor units of workplace ventilation arrangements are positioned at solvent source level.

Viscosity adjustment

The etch resist **SD 2052 AL** 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 thinner **V 5002**

Auxiliary products recommended

- [ELPESPEC® screen opener HP 5200](#)
highly active spray for dissolving dried screen printing inks from the screen; silicone- and grease-free, thus no surface defect/dewettings or smearing effects to be expected
- [ELPESPEC® anti-static spray HP 5500](#)
prevents and eliminates electrostatic discharge occurring during screen printing; silicone- and grease-free
- [ELPESPEC® 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
- [ELPESPEC® cleaning agent R 5821](#)
for the cleaning of equipment and work tools, high flash point (+32 °C [89.6 °F])
- [ELPESPEC® 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 and that copper surfaces preferably have an average surface roughness of 2 µm.

Screen printing parameters recommended

Screen fabric	Polyester 100-40 to 120-34 (old nomenclature: 100-140 T) or corresponding steel fabric
Screen tension	at least 25 N/cm or as specified by the screen mesh manufacturer
Squeegee	65–75 Shore-A hardness, right-angled
Squeegee angle	approx. 70°

Drying/curing

The etch resist **SD 2052 AL** dries by evaporation of the solvents under the application of heat.

- Dry etch resist **SD 2052 AL** in hot air dryers with circulating/exhaust air **at 80-120 °C for 30 min.**

The application of a high temperature will result in a higher surface hardness.

Etching

Acid and alkaline etch baths with a pH value of up to 9 are suitable.

Besides on the thickness of the copper layer, the length of etch time depends on the type, the concentration and temperature of the etch medium. Long etch times may impair the etch resistance and the etch result.

Stripping of etch resist

→ Strip etch resist **SD 2052 AL** at 50 °C [122 °F] in alkaline media with a pH value of 14 (e.g. a 3 – 5% solution of caustic soda).

If necessary the etch resist **SD 2052 AL** can also be stripped in glycol ethers. It fully decomposes when stripped.

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 9 months



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

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.

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