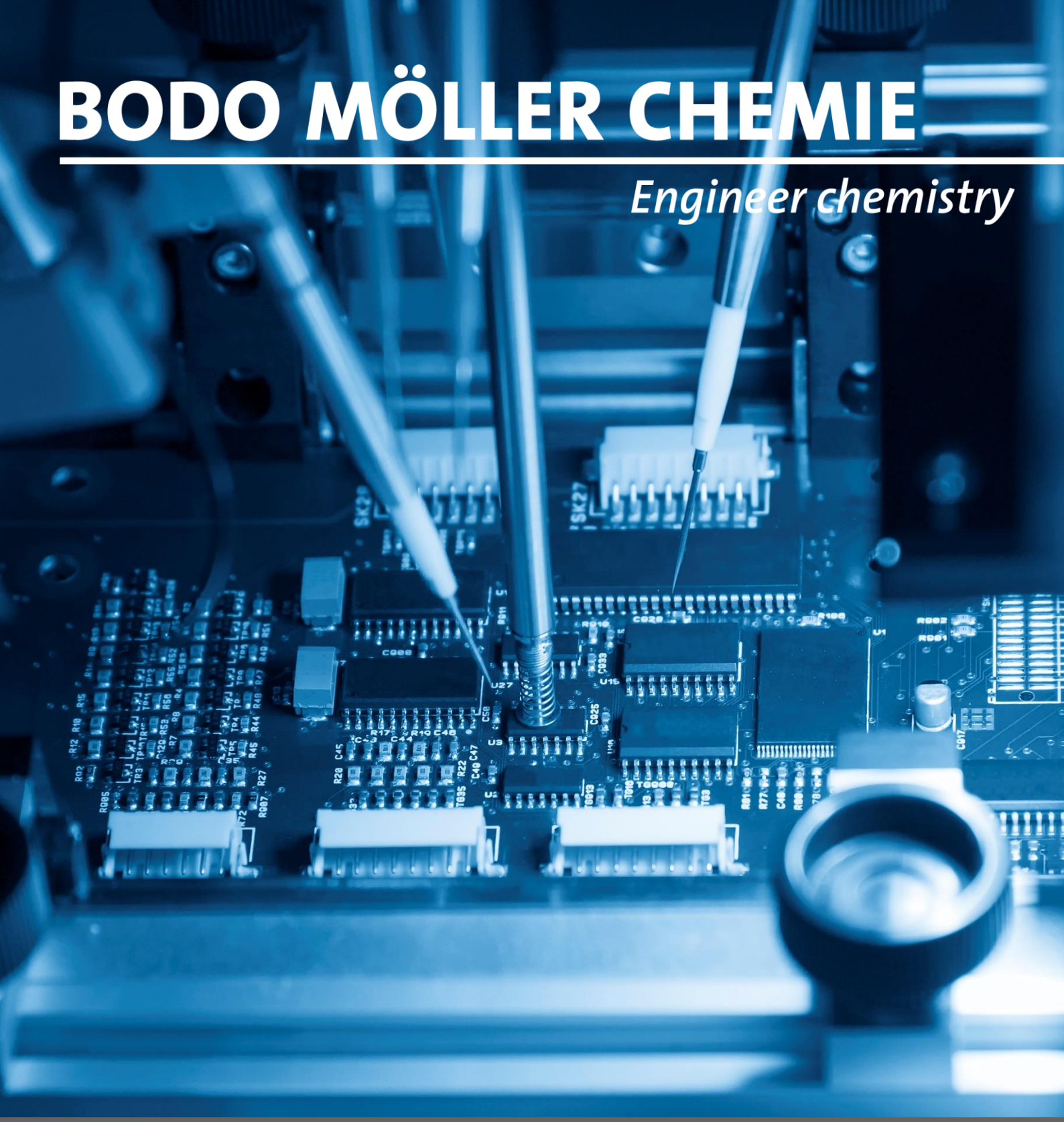
BODO MÖLLER CHEMIE

Engineer chemistry



Materials for electronic component assembly

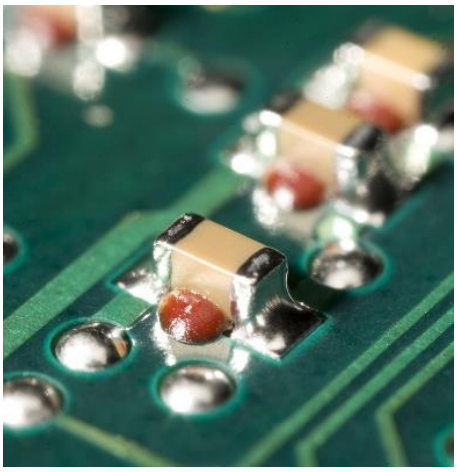
Surface mount adhesives

Surface mount adhesives (SMA) were developed to fix electronic components to the printed circuit board prior to soldering. They are preferably used in wave or wave soldering processes and also to achieve additional adhesion in reflow soldering. The products are based on 1K hot-curing epoxy resins. The material ensures sufficient adhesion even in the uncured state.

We provide printable as well as dispensable products.

Bodo Möller Chemie recommends:

- **LOCTITE® 3609** (REACH-conform)
- **LOCTITE® 3621** (jetting-application)



Adhesive films

With components getting smaller and smaller, combined with ever increasing functionality and performance requirements, thermal management is a critical factor. Henkel's assembly films not only offer best-in-class properties in terms of electrical, thermal, and mechanical performance, but also reduce overall assembly costs by eliminating the need for costly warehousing or further processing at conversion companies.

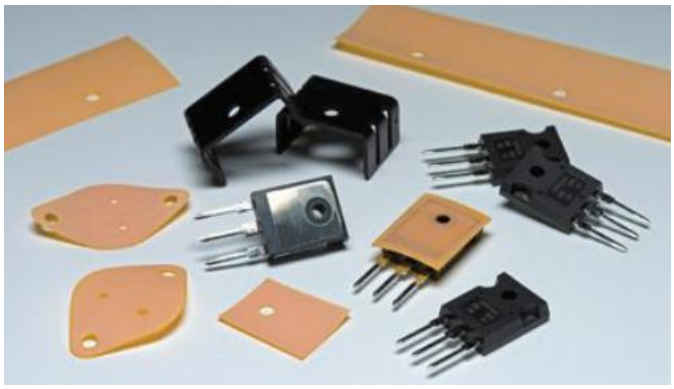
We recommend:

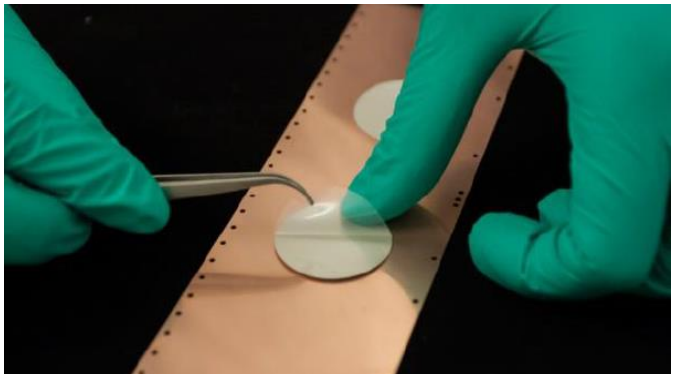
- **LOCTITE® ABLESTIK CF 3350** (electrically conductive)
- **LOCTITE® ABLESTIK 561K** (thermally conductive and for substrates with severely mismatched CTE)
- **LOCTITE® ABLESTIK 550** (non-conductive)

Henkel's assembly films are proven solutions for the most demanding applications requiring the highest reliability. Henkel offers customized, pre-cut film blanks that are precisely matched to complex PCB shapes and patterns. This ensures an exact amount of void-free adhesive with controlled bondline thickness in a given area.

Foils properties

- Epoxy based film
- Uniform film thickness
- Supplied in "dry" form
- Very easy processing
- Available in sheet form or pre-cut sheets available
- Electrically conductive
- Electrically non-conductive
- Thermally conductive
- Thermally non-conductive





Electrically conductive adhesives

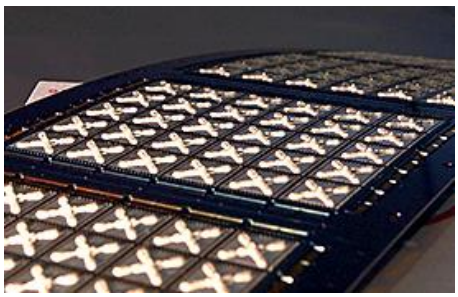
Henkel's electrically conductive LOCTITE® adhesives ensure strong bonds between components and printed circuit boards - for reliable and long-term on-demand performance. A broad portfolio of ECA adhesives in paste form based on different raw material platforms, e.g. acrylates, epoxies, and silicone, offers manufacturers a wide choice and flexibility for different application requirements, as hybrid systems are also possible.

Benefits of LOCTITE® ECCOBOND:

- Cure times of less than two minutes
- Silver or nickel filled systems
- In-line processing capability for exceptionally high throughput
- Suitable for applications with large differences in thermal coefficients of thermal substrates
- Suitable for flip-chip interconnects with tight pitch, where electrical conductivity is desired in only one direction
- Low viscosity and fast flow
- Excellent wettability, and adhesion

Value proposition:

Cost reduction	▪ ECAs that use alternative filler technology or partially replace Ag to control the cost structure without compromising the ECA's performance ▪ ECAs with corrosion protection technology that enable the use of 100% Sn-terminated components ▪ Flexible ECAs with low-temperature cure profile reduce energy consumption in production
Environmentally friendly technology	▪ Low cure temperature ECAs enable the use of temperature sensitive components and substrates ▪ Low temperature ECAs enable lower energy consumption
Enhanced reliability	▪ ECAs that meet the increasing reliability requirements of the industry ▪ ECAs with high current capability and heat dissipation ▪ ECAs with higher operating temperatures
Miniaturization, 3D integration	▪ ECAs for 3DMID electronics with focus on small dot dispensing and printing and reliable performance on non-precious (Sn,...) components.



Bodo Möller Chemie recommends:

- **LOCTITE® ABLESTIK 84-1 LMI** (Hard Ag Epoxy)
- **LOCTITE® ABLESTIK CE 8500** (Hard Ag epoxy/silicone, high temperature)
- **LOCTITE® ABLESTIK CE 3520-3** (low cost Ni filler)
- **LOCTITE® ABLESTIK CA 3556HF** (Snapcure Ag Acrylate)
- **LOCTITE® ABLESTIK 56C** (2K RT curing)
- **LOCTITE® ABLESTIK JM 7000** (very high T, >300°C)

Have we aroused your interest? Our specialists will be happy to advise you:

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