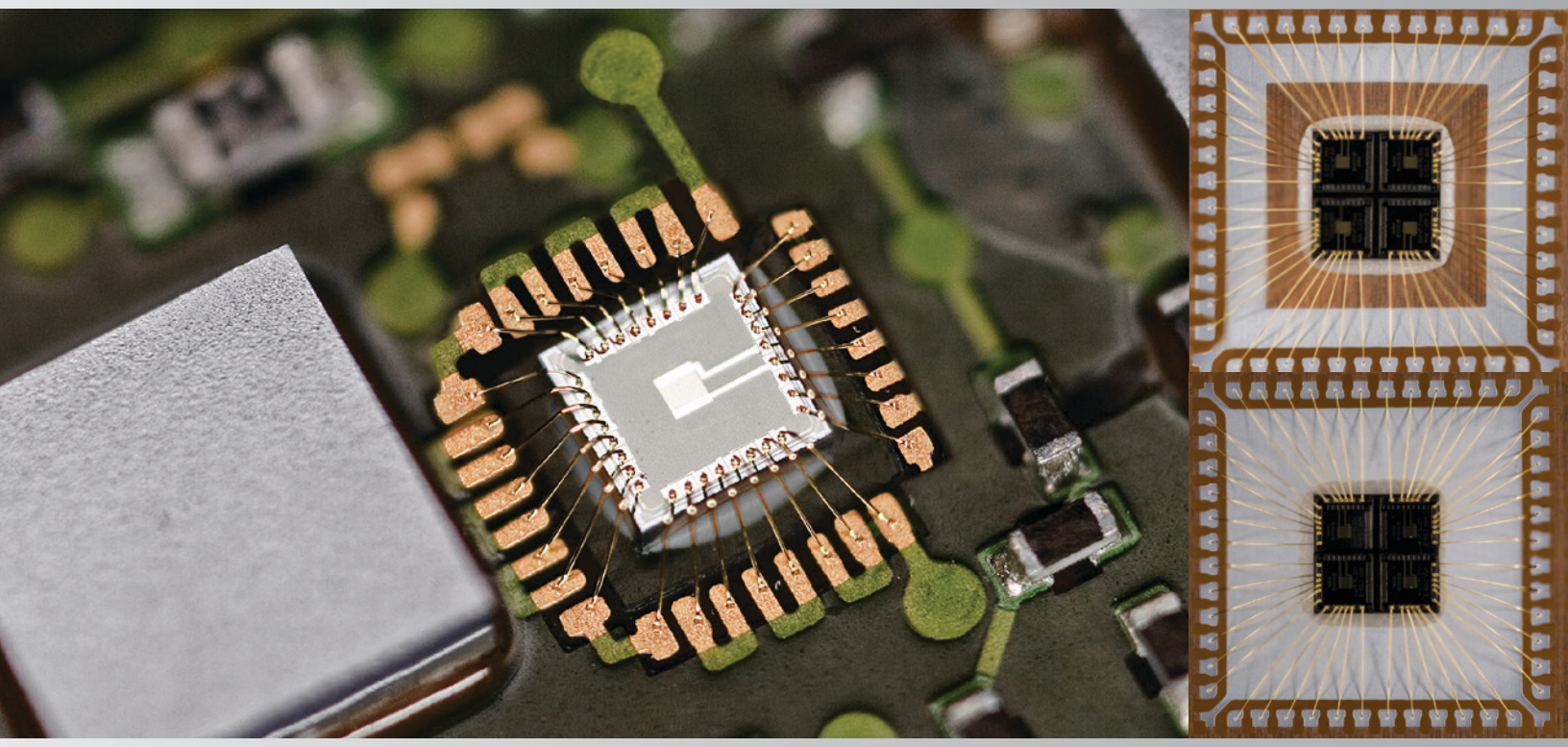
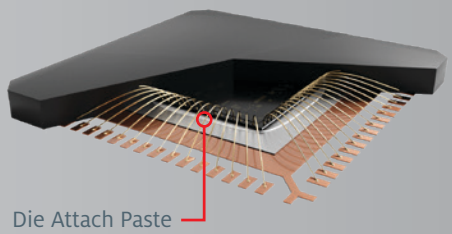
LOCTITE®



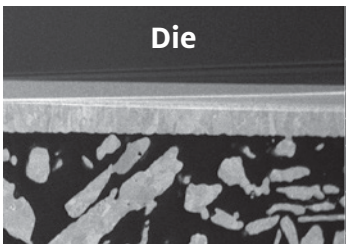
# LOCTITE® *ABLESTIK* ABP 8068T Series

## SEMI-SINTERING DIE ATTACH PASTE

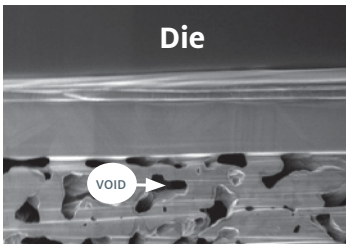
LOCTITE® *ABLESTIK* ABP 8068T series semi-sintering die attach paste delivers a robust, lead-free solder alternative with best-in-class electrical and thermal performance. This technology provides lower in-package thermal resistance than many standard die attach pastes on silver, copper and PPF leadframes, as well as excellent workability. With robust adhesion on small and medium die sizes, this material offers an open time of up to two hours and void-free bond lines, promoting high reliability and manufacturing flexibility.



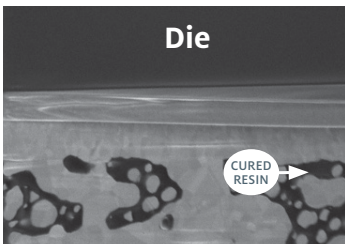

Silver filler does not form good contact with the interface, making traditional **high-thermal die attach pastes** unable to achieve ultra-high thermal conductivity.




**Normal sintering materials** are typically porous, which increases moisture absorption and impacts thermal cycling performance.




***LOCTITE ABLESTIK* ABP 8068T series** achieves void-free bond lines due to an inter-penetrating network (IPN) of sintered silver and cured resin structures.




Henkel

# LOCTITE®
# PRODUCT BENEFITS

## LOWER-TEMPERATURE SINTERING

- Drop-in solution is identical to standard die attach paste applications without the high pressure and high temperature needed for sintering
- Recommended cure:
  - 175°C or above for silver, gold and PPF surfaces
  - 200°C or above for copper surfaces
- Can be cured in both air and nitrogen atmospheres

## MINIMAL VOLATILE ORGANIC COMPOUNDS (VOCs)

- Reduced VOCs compared to typical die attach pastes with high thermal conductivity

## EXCEPTIONAL DISPENSING AND PRINTING

- Consistent needle dispensing for 24 continuous hours and stable for up to 6 hours of stencil open time

## EXCELLENT WORKABILITY

- No silver settling or separation
- Consistent dispensing for 24 continuous hours
- Recommended open time of 2 hr.
- Recommended stage time > 4 hr.

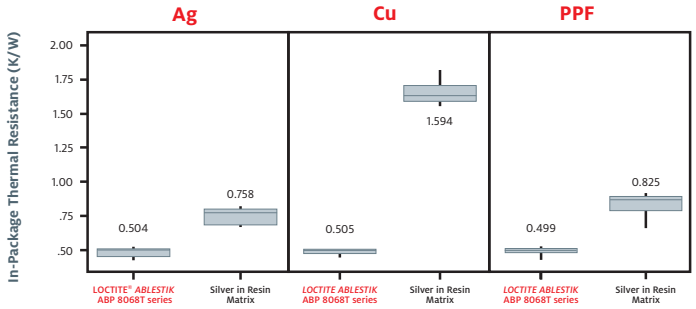
## ROBUST ADHESION

- High die shear strength on various substrate finishes, including silver, copper, nickel-palladium-gold and gold
- Die size range up to 5 mm x 5 mm

## BEST-IN-CLASS THERMAL PERFORMANCE

- Bulk thermal conductivity up to 110 W/m·K
- Low in-package thermal resistance; approximately 0.5 K/W for silver, copper and PPF leadframes

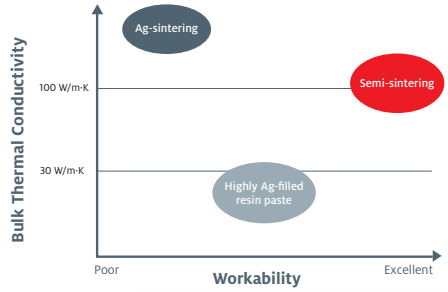
### In-Package Thermal Resistance Comparison



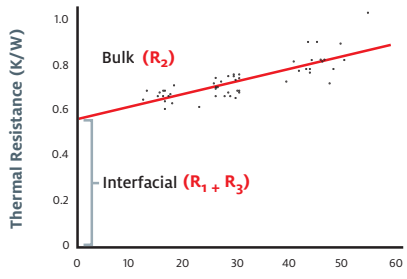

***LOCTITE ABLESTIK* ABP 8068T series:** 30 min. ramp to 200°C + 1 hour at 200°C
**SILVER IN RESIN MATRIX:** 30 min. at 200°C

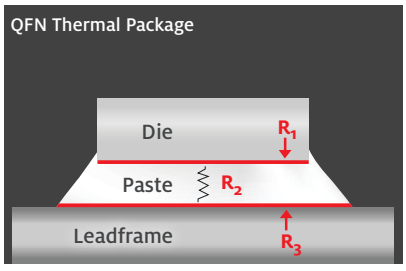
### Thermal and Workability Performance

Semi-sintering offers comparable thermal performance to silver sintering, but with much improved workability



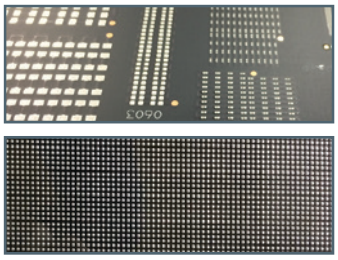

### Interfacial vs. Bulk Thermal Resistance




### Consistent Printing and Dispensing for 24 Continuous Hours

Good printability and consistent dispensing with no separation or missing dots



**Across the Board, Around the Globe.**
**henkel-adhesives.com/electronics**


**Henkel Corporation**
14000 Jamboree Road
Irvine, CA 92606
United States
+1.888.943.6535

**Henkel Europe**
Nijverheidsstraat 7
B-2260, Westerlo
Belgium
+32.1457.5611

**Henkel Asia**
332 Meigui South Road
WaiGaoQiao FTZ
Shanghai 200131 China
+86.21.3898.4800



All marks used above are trademarks and/or registered trademarks of Henkel and its affiliates in the U.S., Germany and elsewhere.
© 2019 Henkel Corporation. All rights reserved. LT-8292/APH-AE-240 (04/19) US