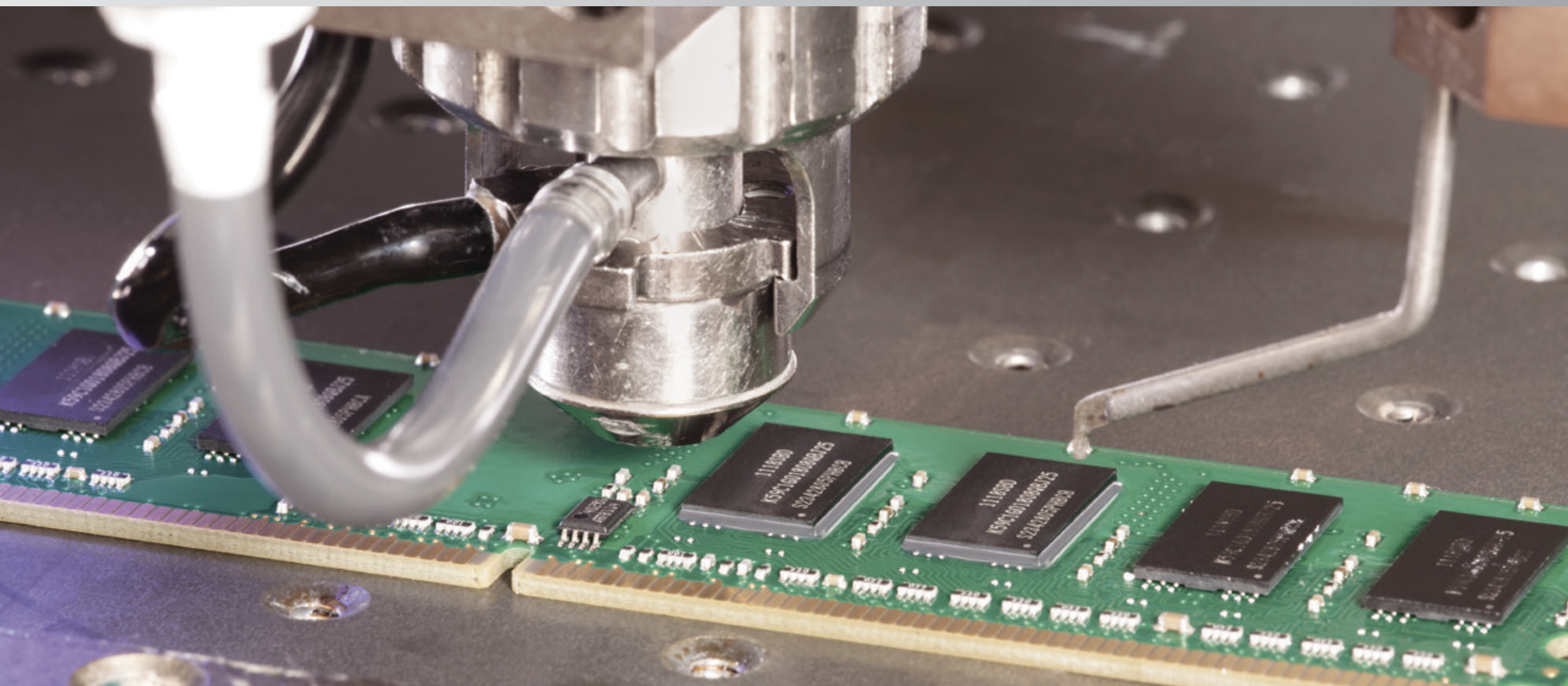
LOCTITE®



LOCTITE® *ECCOBOND* E 1216M

CSP/BGA UNDERFILL

LOCTITE® *ECCOBOND* E 1216M, high-reliability underfill, delivers fast flow and fast cure capabilities for devices such as BGAs, CSPs and PoPs. In applications where reliability and throughput are critical, *LOCTITE ECCOBOND* E 1216M offers the ideal underfill solution.

Key Benefits

Sustainability:

- Largely compatible with various no-clean and halogen-free solder pastes
- Does not contain any ingredients restricted by RoHS
- Under 900 ppm total halogens

Energy Savings:

- Fast flow
- Fast cure

Reliability Improvement:

- Excellent thermal cycle performance
- Excellent drop impact performance

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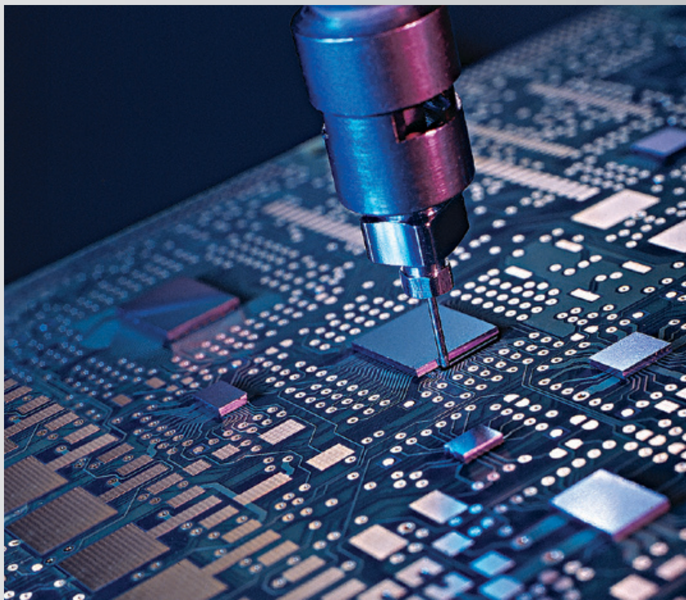
LOCTITE ECCOBOND E 1216M underfill is designed for thermal cycling and drop test reliability enhancement for BGA, CSP, WLCSP and PoP devices where reworkability is not required.



TYPICAL PROPERTIES OF UNCURED MATERIAL	
Viscosity at 25°C (cP)	4,000
Specific Gravity	1.4
Pot Life at 25°C (days)	3
Shelf Life at -20°C (months)	6

TYPICAL PROPERTIES OF CURED MATERIAL		
Glass Transition Temperature, T_g (ppm/°C)		125
Coefficient of Thermal Expansion (ppm/°C)	Below T_g:	35
	Above T_g:	131
Flexural Modulus, 25°C (GPa)		2.97

TYPICAL CURING PERFORMANCE	
Cure Schedule at 130°C (min.)	≥ 8

Note: This is a bondline/material temperature. The above cure profile is a guideline recommendation. Cure conditions (time and temperature) may vary based on customers' experience and their application requirements, as well as customer curing equipment, oven loading and actual oven temperatures.

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