

Board Level Underfills

CAPILLARY UNDERFILLS

Product Name	Description	Key Attributes	Modulus at 25°C (MPa)	Glass Transition Temperature, T _g (°C)	Coefficient of Thermal Expansion, CTE (ppm/°C)		Pot Life	Recommended Cure
					Below T _g	Above T _g		
LOCTITE ECCOBOND E 1172 A	Non-reworkable, capillary flow, epoxy underfill	<ul style="list-style-type: none"> • Snap curable • Fast cure at low temperatures • One component • Non-anhydride curing chemistry • Void-free 	10,000	135	27	85	48 hr. at 25°C	6 min. at 135°C
LOCTITE E 1216M	Non-reworkable capillary flow underfill	<ul style="list-style-type: none"> • Snap or inline cure • Fast, void-free underfill of area array devices • Excellent stability during shipping, storage and use • Excellent adhesion and strength • Non-anhydride curing chemistry 	2,970	125	35	131	5 days at 25°C	3 min. at 165°C
LOCTITE ECCOBOND FP4531	Capillary flow underfill	<ul style="list-style-type: none"> • Snap curable • Fast flow • High adhesion strength • Proven workability at high temperatures • Qualified in automotive reliability conditions 	7,600	161	28	104	24 hr. at 25°C	7 min. at 160°C

CORNERBOND & EDGE BOND UNDERFILLS

Cornerbond								
LOCTITE 3508NH	Reworkable epoxy underfill	<ul style="list-style-type: none"> • One component • Reflow curable • Eliminates post-reflow dispense and cure steps • Reworkable • Halogen-free 	70,000	118	65	175	30 days at 25°C	Cure during Pb-free solder reflow profile at 245°C
Edgebond								
LOCTITE 3128	Epoxy underfill	<ul style="list-style-type: none"> • One component • Low temperature cure • Excellent adhesion to a wide range of materials 	22,000	45	40	130	3 weeks at 25°C	20 min. at 80°C bondline temperature
LOCTITE 3705	Acrylate underfill	<ul style="list-style-type: none"> • One component • Thixotropic • Medium viscosity • Fast UV cure • No post cure required • Good adhesion to a variety of substrates 	44,000	-39 (T _g 1) 77 (T _g 2)	66	151	30 days at 25°C	80 sec. at 30 mW/cm ²