LOCTITE®

Lens Bonding Adhesives

Product Name	Description	Key Attributes	Glass Transition Temperature, T_g (°C)	Coefficient of Thermal Expansion, CTE (ppm/°C)		Viscosity at 25°C (cP)	Modulus at 25°C (MPa)	Recommended Cure
				Belown T_g	Above T_g			
Thermal Cure								
LOCTITE 3129	Epoxy adhesive and sealant	• Excellent adhesion • One component • Low temperature cure	35	47	145	11,800	200	30 min. at 80°C
LOCTITE 3220	Epoxy adhesive and sealant	• One component • Fast cure at low temperatures • Excellent adhesion	26	47	145	8,200	3,240	5 – 10 min. at 80°C
LOCTITE 3220WH	Epoxy adhesive and sealant	• One component • Fast cure at low temperatures • Excellent adhesion • White pigmentation for excellent light reflection	29	55	162	8,940	550	5 – 10 min. at 80°C
LOCTITE ABLESTIK ABP 8420	Epoxy adhesive	• Excellent resin bleed out (RBO) performance • Fast cure at low temperatures • One component • Good adhesion • Medium viscosity	33	53	171	13,500	2,054	15 min. at 150°C
LOCTITE ABLESTIK NCA 2350	Epoxy adhesive and sealant	• Fast cure at low temperatures • One component • Good adhesion • Hot plate or oven cure • Medium viscosity	28	66	180	13,670	2,533	2 min. at 80°C in hot plate
LOCTITE ABLESTIK NCA 2360	Epoxy adhesive and sealant	• Fast cure at low temperatures • One component • Good adhesion • Hot plate or oven cure • Low viscosity	33	53	171	6,296	2,054	2 min. at 80°C in hot plate
UV + Moisture Cure								
LOCTITE ECCOBOND UV 9052	Acrylate adhesive	• One component • Withstands exposure to ink • Cures in shadowed areas • No stringing • T_g can be increased with alternative cure	2	49	248	6,400	1,987	UV cure 0.5 - 1 J for 5 – 10 sec. + moisture cure at ambient humidity
UV + Thermal Cure								
LOCTITE 3131	Acrylated epoxy adhesive	• Designed for image sensor module assemblies and temperature sensitive electronics components • Fast cure at low temperatures • Low viscosity • Low stress	85	49	175	14,000	954	1 sec. at 100 mW/cm² + 30 min. at 60°C
LOCTITE 3217	Acrylated epoxy adhesive	• Designed for image sensor module assemblies and temperature sensitive electronics components • Fast cure at low temperatures	82	53	178	37,600	2,865	1 sec. at 100 mW/cm² + 30 min. at 60°C

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				Belown T_g	Above T_g			
UV + Thermal Cure – Continued								
LOCTITE ABLESTIK NCA 2200	Acrylated epoxy adhesive	• One component • Low viscosity • Fast cure at low temperatures • Good adhesion to a variety of substrates • Designed for image sensor module assemblies and temperature sensitive electronics components	97	43	150	22,000	5,000	2 sec. at 100 mW/cm² + 30 min. at 80°C
LOCTITE ABLESTIK NCA 2280	Acrylated epoxy adhesive	• One component • High thixotropic index • High viscosity • Black in color to prevent light penetration • Fast cure at low temperatures • Good adhesion to liquid crystal polymer (LCP) substrates • Designed for image sensor module assemblies and temperature sensitive electronics components	90	45	156	54,000	4,500	2 sec. at 100 mW/cm² + 30 min. at 80°C
LOCTITE ABLESTIK NCA 2280LV	Acrylated epoxy adhesive	• One component • High thixotropic index • Fast cure at low temperatures • Low transmittance • Good adhesion to liquid crystal polymer (LCP) substrates • Black in color to prevent light penetration • Designed for image sensor module assemblies and temperature sensitive electronics components	75	54	160	32,800	3,000	2 sec. at 100 mW/cm² + 30 min. at 80°C
LOCTITE ABLESTIK NCA 2340	Acrylated epoxy adhesive	• Excellent adhesion • High viscosity • High thixotropic index • Designed for active alignment in camera module assemblies and temperature sensitive electronics components	83	61	195	35,000	3,000	2 sec. at 100 mW/cm² + 30 min. at 80°C
LOCTITE ABLESTIK NCA 2380	Acrylated epoxy adhesive	• Excellent adhesion • Good flow performance • High T_g • Low CTE • Designed for active alignment in camera module assemblies and temperature sensitive electronics components	95	56	183	35,000	3,000	3 sec. at 1000 mW/cm² + 60 min. at 80°C

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