

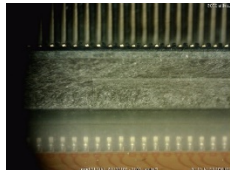
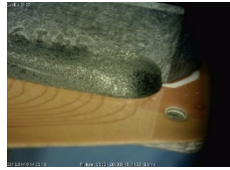
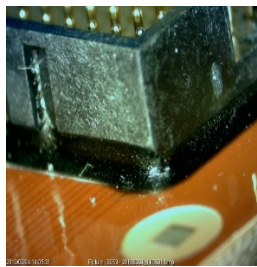
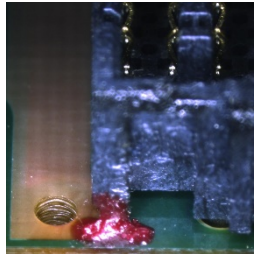
Recommendations for Securing Connectors with Epoxy Adhesives

This document identifies common applications for epoxy adhesives used during assembly of Samtec Connectors, and specific epoxy adhesives used by Samtec during in-house testing and processing.

Potential uses/benefits for epoxy adhesives in connector processing are as follows:

- Added strength to connector
- Underfill capillary flow
- Alternative to conformal coating
 - Minimizes risk of conformal coating wicking into contact areas
 - Minimizes risk of removing masking material that can cause peeling and flaking

Recommended Epoxy Adhesives

Application	Cure Type	Reason	Epoxy Adhesive Suggestions	Technical Data Sheets	Example	Notes
Edgebonding/ Staking	UV	Strain Relief, Flex Applications, Alternative to Conformal Coating	Loctite 3705	Loctite 3705		Designed for high throughput applications. Bone white to beige color allows for visual inspection of solder joints after epoxy.
	Heat	Strain Relief, Flex Applications, Alternative to Conformal Coating	Loctite 3129, Eccobond E 3200	Loctite 3129 Eccobond E 3200		Epoxies designed to cure at low temperatures. Medium viscosity that will not wick to contact areas of connectors.
UnderFill Capillary Flow	Heat	Penetrate gaps under connector body for improved mechanical reliability	Loctite 3593	Loctite 3593		Rapid curing epoxy designed for capillary flow under chip sized packages. Will wick into critical contact areas if process controls are not monitored.
Strength/Stability	Heat	Stablize connector prior to inverted reflow processes	Loctite 3609	Loctite 3609		Bond surface mounted devices to printed circuit boards prior to inverted reflow/wave soldering. Storage requires refrigeration.

Considerations:

The final epoxy adhesive selected will depend on any number of factors, including but not limited to, cost, customer manufacturing capabilities, coefficient of thermal expansion, and working environment.

Please use caution, these recommendations should not be considered design requirements. Samtec recommends testing interconnects on your boards in your process to guarantee optimum results.

References:

1. Internal Samtec Document, "Loctite Epoxy Spreadsheet.xls" by Russ Payton
2. Henkel Adhesives Website: Technical Data Sheets
 - a. <http://tds.henkel.com/tds5/search.asp>