Structural Adhesive Solutions for Composite Repair
Henkel’s technical expertise is based on over 40 years of experience in aerospace applications. As a trusted partner of OEM and MRO customers, Henkel provides the optimum solution to meet the most rigorous industry requirements. Our proven technologies are listed in more than 5,000 aerospace specifications, which provides our customers with a broad portfolio of composite repair solutions.

With support from its authorized aerospace distributor network, Henkel delivers composite repair solutions for airline fleet requirements throughout the globe. Henkel offers its MRO customers products that meet major OEM qualifications in many ready-to-use size configurations.

Henkel offers adhesive solutions for a variety of composite repair requirements.

**Small Repair Applications**
Industry standard solutions for composite repairs.

**Out-of-Autoclave Applications**
Leading film adhesive composite repair solutions.

**Specialty Solutions**
Surfacing Film and Lightning Strike Repairs
Superior new technologies for composite repair requirements.

**Proven Solutions for Composite Repair**

**Ready-to-use Packaging Solutions**

### Barrier Cartridge Kit

**Package Description:**
- Disposable plastic dispensing system.
- Pre-packaged part A and part B in a barrier, ready to use.
- Pre-mixed 2 component system ensures full cure and product performance after mixing.
- Available in 5 oz and 10 oz sizes.

**Package Use:**
- Store material according to manufacturer’s instructions in the original packaging from manufacturer.
- For refrigerated materials, store materials to room temperature (72°F ± 5°F, 22°C ± 2°C) prior to use.
- Remove kit from packaging and mix according to the instructions provided.
- The total number of mixing strokes should be accomplished within the allowances for time noted on instructions.
- Dispose of improperly.

### Injection Cartridge Kit

**Package Description:**
- Disposable plastic dispensing system.
- Pre-packaged part A in tube and part B in rod.
- Pre-mixed 2 component system ensures full cure and product performance after mixing.
- Available in 2 oz and 4 oz sizes.

**Package Use:**
- Store material according to manufacturer’s instructions in original packaging from manufacturer.
- For refrigerated materials, store materials to room temperature (72°F ± 5°F, 22°C ± 2°C) prior to use.
- Remove kit from packaging and mix according to instructions provided.
- The total number of mixing strokes should be accomplished within the allowances for time noted on instructions.
- Dispose of improperly.

### Clam Pack

**Package Description:**
- Pre-measured 2 component system ensures full cure and product performance after mixing.
- Available in 2.5 oz and 6 oz sizes.
- Pre-packaged part A in tube and part B in rod.
- Disposable plastic dispensing system.

**Package Use:**
- Dispose of properly.
- Install kit in manual or pneumatic gun for extrusion of mixed material.
- The total number of mixing strokes should be accomplished within the allowances for time noted on instructions.
- Remove kit from packaging and mix according to instructions provided.
- For refrigerated materials, thaw materials to room temperature (72°F ± 5°F, 22°C ± 2°C) prior to use.
- Remove kit from packaging and remove clip divider to mix.
- Wipe part A and B in the sealed pouch until a uniform mix and color is achieved.
- Dispose of properly.

### Dual Cartridge Kit

**Package Description:**
- Disposable plastic dispensing system.
- Pre-measured 2 component system ensures full cure and product performance after mixing.
- Available in 5 oz, 200 ml and 600 ml sizes.

**Package Use:**
- Store material according to manufacturer’s instructions in original packaging from manufacturer.
- For refrigerated materials, store materials to room temperature (72°F ± 5°F, 22°C ± 2°C) prior to use.
- Remove kit from packaging and mix according to instructions provided.
- Dispose of improperly.

### Pudding Cups

**Package Description:**
- Pre-measured 2 component system ensures full cure and product performance after mixing.
- Available in 25 gram and 50 gram sizes.
- Pre-packaged part A and part B in dual cartridge system.
- Disposable plastic dispensing system.

**Package Use:**
- Dispose of properly.
- For refrigerated materials, thaw materials to room temperature (72°F ± 5°F, 22°C ± 2°C) prior to use.
- Remove kit from packaging and completely empty into the plastic dispensing system.
- Mix equal amounts of part A and B in dual cartridge for extrusion of mixed material.
- Dispense a small amount of material from the static mix tip prior to use.
- Dispose of properly.

### Clip Pack

**Package Description:**
- Pre-measured 2 component system ensures full cure and product performance after mixing.
- Available in 25 gram and 50 gram sizes.
- Pre-packaged part A and part B in system separated by a clip divider.
- Disposable plastic dispensing system.

**Package Use:**
- Dispose of properly.
- Install kit in manual or pneumatic gun with the static mix tip on the dual cartridge for extrusion of mixed material.
- Dispose of properly.

### Double Cartridge / Static Mixer Kit

**Package Description:**
- Pre-measured 2 component system ensures full cure and product performance after mixing.
- Available in 50 ml, 200 ml and 400 ml sizes.
- Pre-packaged part A and part B in dual cartridge system.
- Disposable plastic dispensing system.

**Package Use:**
- Dispose of properly.
- Install kit in manual or pneumatic gun with the static mix tip on the dual cartridge for extrusion of mixed material.
- Dispose of properly.

**Out-of-Autoclave Applications**
Leading film adhesive composite repair solutions.

**Proven Solutions for Composite Repair**

**Ready-to-use Packaging Solutions**

### Barrier Cartridge Kit

**Package Description:**
- Disposable plastic dispensing system.
- Pre-packaged part A and part B in a barrier, ready to use.
- Pre-mixed 2 component system ensures full cure and product performance after mixing.
- Available in 5 oz and 10 oz sizes.

**Package Use:**
- Store material according to manufacturer’s instructions in the original packaging from manufacturer.
- For refrigerated materials, store materials to room temperature (72°F ± 5°F, 22°C ± 2°C) prior to use.
- Remove kit from packaging and mix according to the instructions provided.
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### Injection Cartridge Kit

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### Pudding Cups

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- Pre-measured 2 component system ensures full cure and product performance after mixing.
- Available in 25 gram and 50 gram sizes.
- Pre-packaged part A in tube and part B in rod.
- Disposable plastic dispensing system.

**Package Use:**
- Dispose of properly.
- Dispense a small amount of material from the static mix tip prior to use.
- Dispose of properly.
### Composites Repair Portfolio

**Repair Type**
- Bonding, Potting and Filling

**Size Package Options**
- Clip Pack
- Pouch
- Cartridge Kits

**Key Features**
- Room temperature storage
- High-quality surface finish
- Resistant to UV exposure

**Technology**
- 2-part Epoxy

### Size Package Options

#### Repair Type
- Bonding, Potting and Filling

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#### Technology
- 2-part Epoxy

### Service Temperature

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<tr>
<th>Technology</th>
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### Product

- **LOCTITE EA 934 NA AERO**
  - **LOCTITE EA 9394 AERO**
  - **LOCTITE EA 9395 AERO**
  - **LOCTITE EA 9695 AERO**
  - **LOCTITE EA 7000 AERO**
  - **LOCTITE EA 9845 SF AERO**
  - **LOCTITE EA 9845 LSC AERO**

### Size Package Options

- **Cartridge Kits**
- **Gallons**
- **Quarts**

### Repair Type
- Bonding, Potting and Filling

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- Room temperature storage
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Meet the Next Generation ... Benzoxazine Resins

Henkel launched a full product portfolio for the aerospace industry based on benzoxazine resin technology, offering advantages to commonly used epoxies, phenolics and BMI’s. Benefits are across the entire value chain, including: weight savings, improved health and safety, storage and shipment at room temperature, less waste due to less spoilage and minimal shrinkage.

LOCTITE® Benzoxazines are suitable for most fabrication methods and processes, including: Hand lay-up, ATL, AFP, autoclave, autoclave curing, RTM, VARTM, RFI, honeycomb sandwich co-curing and secondary bonding.

For more information on LOCTITE® Benzoxazine Resin Technology portfolio, please consult “Benzoxazine Resin Technology” brochure and your Henkel sales representative.

Authorized Aerospace Distributor Partners

Henkel maintains an AS 9100 registered Quality Management System and audits its distributor partners to this standard. All authorized distributors maintain an AS 9120 registration, which ensures warranty flow down throughout the value chain. As a result, Henkel’s composite repair solutions are readily available from our global network of authorized distributor partners. For a current list of authorized distributors, please visit the following link:

www.henkel.com/aerospace-distributor

<table>
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<th>Feature</th>
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<tr>
<td>Audit &amp; control of authorized distributor network</td>
<td>Global product availability with aerospace focused technical support</td>
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<td>Product shipment according to manufacturer instructions &amp; OEM specifications</td>
<td>Compliant shipment package with lot traceability and shelf life control</td>
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<td>Full manufacturer warranty flow down</td>
<td>Complete certification package, paperwork and warranty</td>
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<td>2 component lot matched system</td>
<td>Full performance characteristics tested to OEM requirements</td>
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<tr>
<td>Local sales support &amp; inventory of ready-to-use package configurations</td>
<td>Just-in-time availability &amp; safety stock for AOG needs</td>
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Main Improvements

- Improved performance over epoxy, phenolic and BMI
- Storage and shipping at room temperature
- Reduced waste due to less spoilage
- Improved health and safety
- Lighter weight allows lower fuel consumption

Advantages To Comparable Technologies

<table>
<thead>
<tr>
<th>Epoxy</th>
<th>LOCTITE® Benzoxazine vs. Phenolic</th>
<th>BMI</th>
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<tr>
<td>Lower cure shrinkage and cure exotherm</td>
<td>No microcracking</td>
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<tr>
<td>Improved hot/wet performance</td>
<td>Improved durability</td>
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<td>Inherent Flame, Smoke and Toxicity characteristics</td>
<td>No water generated during cure</td>
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<td>Lower cure temperature and shorter cure cycle</td>
<td>Lower cost</td>
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<tr>
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