

LOCTITE

Structural Adhesive Solutions for Composite Repair



Henkel

Proven 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 distribution 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.



Ready-to-use Packaging Solutions

Barrier Cartridge Kit

Package Description:

- › Disposable plastic dispensing system.
- › Pre-packaged part A and part B system separated by a foil barrier.
- › Pre-measured 2 component system ensures full cure and product performance after mixing.
- › Available in 2.5 oz and 6 oz sizes.

Package Use:

- › Store material according to manufacturer's instructions in the original packaging from manufacturer.
- › For refrigerated materials, thaw 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 allowance for time noted on instructions.
- › Install kit in manual or pneumatic gun for extrusion of mixed material.
- › Dispose of properly.

Barrier Cartridge Kit



Injection Cartridge Kit

Package Description:

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

Package Use:

- › Store material according to manufacturer's instructions in original packaging from manufacturer.
- › For refrigerated materials, thaw 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 allowance for time noted on instructions.
- › Install kit in manual or pneumatic gun for extrusion of mixed material.
- › Dispose of properly.

Injection Cartridge Kit



Dual Cartridge Kit

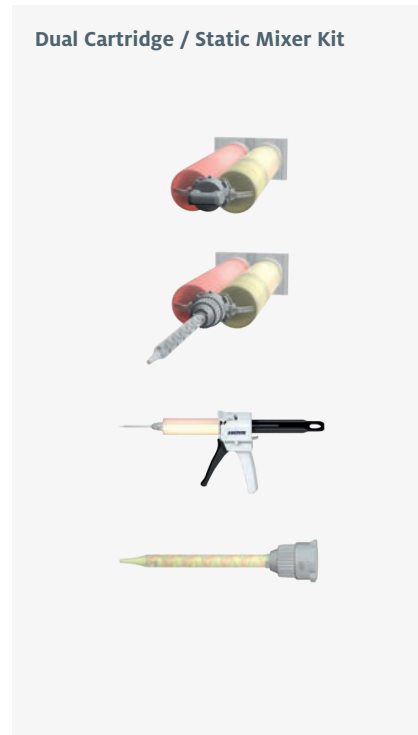
Package Description:

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

Package Use:

- › Store material according to manufacturer's instructions in original packaging from manufacturer.
- › For refrigerated materials, thaw materials to room temperature (72 °F +/- 5 °F, 22 °C +/- 2 °C) prior to use.
- › Install kit in manual or pneumatic gun with the static mix tip on the dual cartridge for extrusion of mixed material.
- › Dispense a small amount of material from the static mix tip prior to use.
- › Dispose of properly.

Dual Cartridge / Static Mixer Kit



Clip Pack

Package Description:

- › Pre-packaged part A and part B system separated by a clip divider.
- › Pre-measured 2 component system ensures full cure and product performance after mixing.
- › Available in 25 gram and 50 gram sizes.

Package Use:

- › Store material according to manufacturer's instructions in original packaging from manufacturer.
- › 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.
- › Mix part A and part B in the sealed pouch until a uniform mix and color is achieved.
- › Dispose of properly.

Clip Pack



Pudding Cups

Package Description:

- › Pre-packaged part A and part B system provided in separate containers.
- › Pre-measured 2 component system ensures full cure and product performance after mixing.
- › Available in several sizes.

Package Use:

- › Store material according to manufacturer's instructions in original packaging from manufacturer.
- › For refrigerated materials, thaw materials to room temperature (72 °F +/- 5 °F, 22 °C +/- 2 °C) prior to use.
- › Remove kit from packaging, empty part B into part A and fold the materials together with a mix handle.
- › To ensure full kit performance, use the entire contents of part A with part B.
- › Dispose of properly.

Pudding Cups





Composites Repair Portfolio

Repair Type	Bonding, Potting and Filling		
Size Package Options	<ul style="list-style-type: none"> › Clip Pack › Pudding Cup › Pints › Quarts › Gallons › Cartridge Kits 	<ul style="list-style-type: none"> › Clip Pack › Pudding Cup › Pints › Quarts › Gallons › Cartridge Kits › Dual Cartridge 	<ul style="list-style-type: none"> › Clip Pack › Quarts › Gallons › Cartridge Kits
Technology	2-part Epoxy	2-part Epoxy	2-part Epoxy
Color (A / B / Mixed)	Gray / Amber / Gray	Gray / Black / Gray	Light Blue / Olive Brown-Black / Gray-Blue
Service Temperature*	300 °F (149 °C)	350 °F (177 °C)	350 °F (177 °C)
Consistency	Thixotropic / 800 Poise @ 77 °F (25 °C)	Thixotropic / 1600 Poise @ 77 °F (25 °C)	Thixotropic / 1000 – 3000 Poise @ 77 °F (25 °C)
Pot Life (450g Mass)	40 min @ 77 °F (25 °C)	90 min @ 77 °F (25 °C)	95 – 100 min @ 77 °F (25 °C)
Key Features	<ul style="list-style-type: none"> › Room temperature storage › Room temperature cure › Good gap filler › Develops strength rapidly › Qualified to MMM-A-132 › Qualified by many OEMs 	<ul style="list-style-type: none"> › Room temperature storage › Room temperature cure › Good gap filler › Excellent mechanical properties › Low toxicity › Improved hot / wet properties › Qualified to MMM-A-132 › Qualified by many OEMs 	<ul style="list-style-type: none"> › Room temperature cure › Non-Metallic filler › Excellent mechanical properties › Good compressive strength › Improved hot / wet properties › Qualified by many OEMs
Product	LOCTITE EA 934NA AERO	LOCTITE EA 9394 AERO	LOCTITE EA 9395 AERO
Also Known As	HYSOL EA 934NA	HYSOL EA 9394	HYSOL EA 9395

* Service temperature is defined as the temperature at which the adhesive still retains 1000 psi / 6.9 MPa using test method ASTM D1002.

Repair Type	Laminating and Wet Lay Up			High Service Temperature	
Size Package Options	<ul style="list-style-type: none"> › Clip Pack › Pudding Cup › Pints › Quarts 	<ul style="list-style-type: none"> › Clip Pack › Pudding Cup › Quarts › Cartridge Kits 	<ul style="list-style-type: none"> › Clip Pack › Pudding Cup › Pints › Quarts › Gallons › Cartridge Kits 	<ul style="list-style-type: none"> › Clip Pack › Quarts › Cartridge Kits 	<ul style="list-style-type: none"> › Quarts
Technology	2-part Epoxy	2-part Epoxy	2-part Epoxy	2-part Epoxy	2-part Epoxy
Color (A / B / Mixed)	Amber / Amber / Amber	Light Beige / Blue / Light Blue	Blue / Purple / Green-Purple	Gray / Purple / Gray-Purple	Blue / Purple / Violet
Service Temperature*	300 °F (149 °C)	350 °F (177 °C)	350 °F (177 °C)	450 °F (232 °C)	400 °F (204 °C)
Consistency	Low Viscosity / 162 Poise @ 77 °F (25 °C)	Low Viscosity / 120 – 160 Poise @ 77 °F (25 °C)	Low Viscosity / 35 Poise @ 77 °F (25 °C)	Moderate Viscosity	Low Viscosity / < 35 Poise @ 77 °F (25 °C)
Pot Life	>30 min @ 77 °F (25 °C)	2 hrs @ 77 °F (25 °C)	75 – 90 min @ 77 °F (25 °C)	8 hrs @ 77 °F (25 °C)	8 hrs @ 77 °F (25 °C)
Key Features	<ul style="list-style-type: none"> › Room temperature cure › Excellent elevated temperature strength › Accelerated heat cure capability › Qualified by many OEMs 	<ul style="list-style-type: none"> › Accelerated heat cure capability › Improved hot / wet properties › Good wetting capability › Qualified by many OEMs 	<ul style="list-style-type: none"> › Room temperature storage › Room temperature cure › Excellent strength properties from –67 °F to 350 °F (–55 °C to 177 °C) › Qualified to MMM-A-132 › Qualified by many OEMs 	<ul style="list-style-type: none"> › Accelerated heat cure capability › Excellent strength properties above 400 °F (204 °C) › Low toxicity › Long pot life › Qualified to MMM-A-132 › Qualified by many OEMs 	<ul style="list-style-type: none"> › Accelerated heat cure capability › Room temperature storage › Low toxicity › Long pot life › Improved hot / wet properties
Product	LOCTITE EA 956 AERO	LOCTITE EA 9390 AERO	LOCTITE EA 9396 AERO	LOCTITE EA 9394C-2 AERO	LOCTITE EA 9396C-2 AERO
Also Known As	HYSOL EA 956	HYSOL EA 9390	HYSOL EA 9396	HYSOL EA 9394/C-2	HYSOL EA 9396/C-2

Out-of-Autoclave

Specialty Repair – Surfacing Film and Lightning Strike

<ul style="list-style-type: none"> › Film Adhesive 	<ul style="list-style-type: none"> › Film Adhesive 	<ul style="list-style-type: none"> › Film Adhesive 	<ul style="list-style-type: none"> › Film Adhesive
Epoxy Film	Epoxy Film	Epoxy Film	Epoxy Film
Uncured: Red Cured: Gold	Green	Blue	Blue
>300 °F (149 °C)	> 300 °F (149 °C)	350 °F (177 °C)	350 °F (177 °C)
Film Adhesive	Film Adhesive	Film Adhesive	Film Adhesive
90 days @ 77 °F (25 °C)	>30 days @ 90 °F (32 °C), 50 % RH	45 days @ 77 °F (25 °C)	45 days @ 77 °F (25 °C)
<ul style="list-style-type: none"> › Accelerated heat cure capability › Excellent environmental resistance › Good co-cure capability with composites › Long out-time makes it ideal for repairs › Qualified to MMM-A-132 › Qualified by many OEMs 	<ul style="list-style-type: none"> › Accelerated heat cure capability › Excellent peel and low temperature (–67°F / –55°C) properties › Good co-cure capability with composites › Qualified by many OEMs 	<ul style="list-style-type: none"> › Accelerated heat cure capability › High quality surface finish › Good paint adhesion › Lower weight repair material › Long out-time makes it ideal for repairs 	<ul style="list-style-type: none"> › Accelerated heat cure capability › Complete lightning strike repair solution › Lower weight repair material › Long out-time makes it ideal for repairs
LOCTITE EA 9695 AERO	LOCTITE EA 7000 AERO	LOCTITE EA 9845SF AERO	LOCTITE EA 9845LSC AERO
HYSOL EA 9695	HYSOL PL 7000	HYSOL EA 9845 SF	HYSOL EA 9845 LSC

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

Feature

- › Audit & control of authorized distributor network

- › Product shipment according to manufacturer instructions & OEM specifications

- › Full manufacturer warranty flow down

- › 2 component lot matched system

- › Local sales support & inventory of ready-to-use package configurations



Benefit

- › Global product availability with aerospace focused technical support
- › Compliant shipment package with lot traceability and shelf life control
- › Complete certification package, paperwork and warranty
- › Full performance characteristics tested to OEM requirements
- › Just-in-time availability & safety stock for AOG needs

LOCTITE®
BONDERITE®
TECHNOMELT®
TEROSON®
AQUENCE®

NORTH AMERICA

Henkel Corporation Aerospace

P. O. Box 312
2850 Willow Pass Road
Bay Point, CA 94565
United States
Tel.: +1.925.458.8000
Fax: +1.925.458.8030

LATIN AMERICA

Henkel Brazil Ltda

Rua Karl Huller, 136
Diadema – SP
Brazil
09941-410
Tel.: +55.11.3205.8955

Henkel Mexicana

Boulevard Magnocentro No.8 Piso 2
Centro Urbano Interlomas
52760 Huixquilucan
Edo. De México
Tel.: +52.55.33.00.30.00

EUROPE

Henkel Nederland B.V.

Brugwal 11
3432 NZ Nieuwegein
Netherlands
Tel.: +31.30.6073.911
Fax: +31.30.6054.457

Henkel AG & Co. KGaA

Aerospace

Henkelstraße 67
40589 Düsseldorf
Germany
Tel.: +49.211.797.5192
Fax: +49.211.798.12998

ASIA-PACIFIC

Henkel (China) Co. Ltd

No. 928 Zhang Heng Road
Pu Dong, 201203 Shanghai
China
Tel.: +86.21.2891.8882
Fax: +86.21.6360.6070

Henkel Japan Ltd.,

Henkel Technology Center

27-7 Shin Isogo-cho, Isogo-kut
Yokohama-shi
Kanagawa 235-0017
Japan
Tel.: +81.45.758.1800
Fax: +81.45.758.1851

Henkel Australia Pty. Ltd., Kilsyth

135-141 Canterbury Road
3137 Kilsyth, VIC
Australia
Tel.: +61.3.9724.6444
Fax: +61.3.9728.5877

Henkel Aerospace Products: <https://www.henkel-adhesives.com/us/en.html>