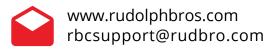




1-800-375-0605 Option 8 for 24/7 Service





Technical Process Bulletin

Epoxy Paste Adhesive Technical Data Sheet

INTRODUCTION

LOCTITE EA 9807 AERO is a two-part room temperature curing intermediate density structural epoxy syntactic flame retardant potting compound for use on honeycomb assembly parts and repair applications.

FEATURES

- Ambient Storage
- Pourable Consistency
- Low Exotherm
- Short Gel Time

- Flame Retardant
- Low Fluid Immersion Uptake
- Dimensional Stability
- Excellent Mechanical Properties

Physical Properties

Component	Part A	Part B
Color	Purple	Amber
Consistency	Paste	Liquid
Shelf Life at ≤82 (28°C)	12 months	12 months
Mix Ratio	100	30

Component	Mixed		
Color	Light Purple		
Viscosity	19,500 cps (19.5 Pa-s)		
Cured Density	0.85 g/cc		
Gel Time at 77°F (25°C)	70±5 minutes (67 grams)		
Shore D Hardness at	55 (8 hours), sandable		
77°F (25°C) & <50% RH	70 (24 hours), sandable		

Remark: Surface tackiness is normal after a room temperature cure when exposed to the environment. The surface is sandable with the surface tackiness after 8 hours at 77°F (25°C).

Mixing Instructions

Mix Type	Mass	Mix Time	Mix Speed
by Contrifugo	≤200 grams	30 seconds	1000 rpm
by Centrifuge	400 grams	30 seconds	1500 rpm
by Hand	≤100 grams	2-3 minutes	Slow
	300 grams	5 minutes	Slow

Remark: Centrifuge mixing is the preferred method for mixing. If mixing by hand, slowly mix both components to reduce frothing.





LOCTITE EA 9807 AERO Epoxy Paste Adhesive Technical Data Sheet

Cure Schedule Options

- 7 days at 77°F (25°C).
- 90 minutes at 260°F (127°C) after 70 minutes at 77°F (25°C).
- 60 minutes at 350°F (177°C) after 70 minutes at 77°F (25°C).

Remark: For applications that require an elevated heat cure, allow the material to gel at ambient prior to exposing the material to elevated cure temperatures to prevent excessive cure temperatures.

Flammability (15 Second Horizontal Direction)

• Sample Dimension: 0.5" x 0.5" x 5" (12.7mm x 12.7mm x 127mm).

Cure Temperature	77°F (25°C)	260°F (127°C)	350°F (177°C)	
Cure Time	7 days	90 minutes	60 minutes	
Burn Rate, in/min. (cm/min.)	0.16 (0.41)	0.14 (0.36)	0.16 (0.41)	
Burn Length, inch (cm)	1.6 (4.1)	1.6 (4.1)	1.6 (4.1)	

Fluid Immersion (Percent Absorption)

- Sample Dimension: 0.5 in³ (12.7 mm³).
- Fluid Soak Time: 24 hours at 77°F (25°C).

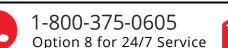
Cure Temperature	77°F (25°C)	260°F (127°C)	350°F (177°C)	
Cure Time	7 days	90 minutes	60 minutes	
TT-S-735 Type III	0.01	0.02	0.01	
MIL-PRF-5606 Hydraulic	0.19	0.15	0.25	
Skydrol LD4	0.24	0.17	0.20	
Distilled Water	0.08	0.10	0.07	

Coefficient of Thermal Expansion

- Test Method: ASTM E831-19 on TMA Q400 TA Instrument
- Sample Dimension: 0.25 in³ (6.35 mm³).

Cure Temperature	Below Tg (CTE 1) (µm/m-°C)	Above Tg (CTE 2) (µm/m-°C)	Glass Transition (Tg) °F (°C)
7 days at 77°F (25°C)	52.92	101.7	210 (99)
90 minutes at 260°F (127°C)	45.16	101.7	200 (93)
60 minutes at 350°F (177°C)	48.62	117.3	210 (99)









LOCTITE EA 9807 AERO Epoxy Paste Adhesive Technical Data Sheet

Mechanical Test Properties

Tensile Lap Shear (TLS) Strength Performance

- Test Method per ASTM D1002 (EN2243-1).
- Metal: 2024T-3 Clad, 0.063" (1.6mm) thick.
- Etch: Phosphoric Acid Anodized per ASTM D3933.
- Cured bondline thickness: 10 mils.

Test Temperature	77°F (25°C)			
Cure Temperature	77°F	350°F	350°F	
Cure remperature	(25°C)	(177°C)	(177°C)	
Cure Time	7 days 60 minutes 14 day			
TI S Strongth poi (MDo)	4066	3976	3596	
TLS Strength, psi (MPa)	(28.0)	(27.4)	(24.8)	

Compression Performance

- Test Method per ASTM D695 (ISO 604).
- Sample dimension: 0.5" x 0.5" x 1.0" (12.7mm x 12.7mm x 2.54mm).
- Sample soak time at elevated test temperature was 10 min. at test temperature prior to testing.

Test Temperature	77°F (25°C)			350°F (177°C)		
Cure Temperature	77°F	350°F	350°F	350°F	350°F	
	(25°C)	(177°C)	(177°C)	(177°C)	(177°C)	
Cure Time	7 days	60 minutes	14 days	60 minutes	14 days	
Ultimate Strength, ksi (MPa)	9.33	11.36	13.44	1.35	1.30	
	(64.3)	(78.3)	(92.7)	(9.3)	(9.0)	
Modulus, ksi (MPa)	531	387	441	16.5	17.2	
	(3661)	(2668)	(3041)	(113.8)	(118.6)	









LOCTITE EA 9807 AERO Epoxy Paste Adhesive Technical Data Sheet

Handling Precautions

Do not handle or use until the Material Safety Data Sheet has been read and understood. For industrial use only.

DISPOSAL INFORMATION

Dispose of spent epoxy resin residue per local, state and regional regulations. Refer to HENKEL TECHNOLOGIES MATERIAL SAFETY DATA SHEET for additional disposal information.

PRECAUTIONARY INFORMATION

General:

As with most epoxy based systems, use this product with adequate ventilation. Do not get in eyes or on skin. Avoid breathing the vapors. Wash thoroughly with soap and water after handling. Empty containers retain product residue and vapors so obey all precautions when handling empty containers.

CAUTION! This material may cause eye and skin irritation or allergic dermatitis. It contains epoxy resins.

WARNING!

This material causes eye and skin irritation or allergic dermatitis. It contains amines.

Before using this product refer to container label and HENKEL TECHNOLOGIES MATERIAL SAFETY DATA SHEET for additional precautionary, handling and first aid information.

Note The data contained herein are furnished for information only and are believed to be reliable. We cannot assume responsibility for the results obtained by others over whose methods we have no control. It is the user's responsibility to determine suitability for the user's purpose of any production methods mentioned herein and to adopt such precautions as may be advisable for the protection of property and of persons against any hazards that may be involved in the handling and use thereof. In light of the foregoing, Loctite Corporation specifically disclaims all warranties expressed or implied, including warranties of merchantability or fitness for a particular purpose, arising from sale or use of Loctite Corporation's products. Loctite Corporation specifically disclaims any liability for consequential or incidental damages of any kind, including lost profits. The discussion herein of various processes or compositions is not to be interpreted as representation that they are free from domination of patents owned by others or as a license under any Loctite Corporation patents that may cover such processes or compositions. We recommend that each prospective user test his proposed application before repetitive use, using this data as a guide. This product may be covered by one or more United States or foreign patents or patent applications.

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