



Technical Process Bulletin

LOCTITE HC 3056 AERO

Epoxy Paste Adhesive

(KNOWN AS Hysol TF 3056)

INTRODUCTION

LOCTITE HC 3056 AERO is a two-component low-density potting compound. It is self-extinguishing and its thixotropic characteristics make it ideal for use in honeycomb panels for edge close out, insert potting and smoothing. LOCTITE HC 3056 AERO is a closed cell structure with minimum moisture penetration. Although it is epoxy chemistry, clean up is with hot, soapy water rather than solvents.

FEATURES

- Two Component
- Room Temperature Cure
- Low Density
- Water Clean Up
- Good for Potting, Edge Filling
- Good Compressive Strength

Uncured Properties

	<u>Part A</u>	<u>Part B</u>	<u>Mixed</u>
Color	White	White	White
Viscosity @ 77°F/25°C	Viscous Paste	Viscous Paste	
Density, lbs/gallon (g/ml)	4.73 (0.57)	2.78 (0.33)	4.01 (0.48)
Shelf life @ <40°F/4°C	1 year	1 year	
@ <77°F/25°C	12 months	12 months	

This material will normally be shipped at ambient conditions, which will not alter our standard warranty, provided that the material is placed into its intended storage upon receipt. Premium shipment is available upon request.

Handling

Mixing - This product requires mixing two components together just prior to application to the parts to be filled. Complete mixing is necessary. The temperature of the separate components prior to mixing is not critical, but should be close to room temperature (77°F/25°C).

Mix Ratio	<u>Part A</u>	<u>Part B</u>
By Weight	100	34.2

Note: Volume measurement is not recommended for structural applications unless special precautions are taken to assure proper ratios.

Pot Life (70 gram mass) 60 minutes @75°F/25°C
Method - ASTM D2471 in water bath.



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Application

Mixing - Combine Part A and Part B in the correct ratio and mix thoroughly. THIS IS IMPORTANT! Heat buildup during or after mixing is normal. Do not mix quantities greater than 450 grams as dangerous heat buildup can occur causing uncontrolled decomposition of the mixed adhesive. TOXIC FUMES CAN OCCUR, RESULTING IN PERSONAL INJURY. Mixing smaller quantities will minimize the heat buildup.

Applying - Surfaces should be clean, dry and properly prepared. For optimum surface preparation consult the LOCTITE Surface Preparation Guide. Handling strength for this material will occur in 24 hours @ 77°F/25°C.

Curing - This adhesive may be cured for 5 - 7 days @ 77°F/25°C. Accelerated cures up to 150°F/66°C (for small masses only) may be used as an alternative. For example, 5 hours @ 125°F/52°C or 1 hour @ 150°F/66°C will give complete cure.

Cleanup - It is important to remove excess material from the work area and application equipment before it hardens. Hot soapy water is suitable for removing uncured adhesive. Be careful not to get water in the finished parts.

Bond Strength Performance**Tensile Lap Shear Strength**

Tensile lap shear strength tested per ASTM D1002 after curing for 24 hours @ 77°F/25°C. Adherends are 2024-T3 AlClad aluminum treated with phosphoric acid anodize per ASTM D3933.

<u>Test Temperature, °F/°C</u>	<u>Typical Results</u>	
	<u>psi</u>	<u>MPa</u>
77/25	1,300	9.0

Bulk Resin Properties

Chemical Resistance* - after exposure to

	<u>Average Weight Increase, %</u>
77°F/25°C water - 24 hours	2.57
Mil-S-3136 - 24 hours	0.17
JP-4 Fuel - 24 hours	1.14
Skydrol 500 - 24 hours	1.92

*All chemical resistance tests were performed @ 77°F/25°C

Compressive Properties - tested using 0.5 inch/12.7cm castings per ASTM D695.

Compressive Strength @ 77°F/25°C	2,500 psi	17.2 MPa
Compressive Modulus @ 77°F/25°C	110 ksi	758 MPa

Flammability - tested per FTMS 406, Method 2021.

Horizontal - self extinguishing within 5 seconds

Vertical - self extinguishing within 10 seconds



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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 remover and paint 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.

PART A

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

PART B

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.





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Note

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



6550 Oley Speaks Way
Canal Winchester, OH 43110



www.rudolphbros.com
RBCsupport@rudbro.com