



Hysol® EA 9394/C-2

Epoxy Paste Adhesive

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Description

Hysol EA 9394/C-2 is an elevated temperature curing, high service temperature structural paste adhesive. Qualified to MMM-A-132, Type II structural paste adhesive. Hysol EA 9394/C-2 uses a non-aromatic amine curing agent that retains many of the excellent properties offered by aromatic amine cured systems, high temperature service with a long pot life.

Features

Excellent Strength Above 400°F/204°C
Non-MDA, Non Aromatic Amine Curing Agents
Long Pot Life

Uncured Adhesive Properties

	Part A	Part B
Color	Gray	Purple
Viscosity @ 77°F Brookfield, HBT	5,700 - 7,200 Poise Spdl 7 @ 20 rpm	1 Poise Spdl 6 @ 20 rpm
Viscosity @ 25°C Brookfield, HBT	570 - 720 Pa·S Spdl 7 @ 2.1 rad/s	0.1 Pa·S Spdl 6 @ 10.47 rad/s
Density (g/ml)	1.45	1
Shelf life		
@ <40°F/4°C	1 year	1 year
@ <77°F/25°C	1 year	1 year

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 bonded. 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	Part A	Part B
By Weight	100	20

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

Pot Life (100 g mass) 8 hours @ 77°F/25°C
Method - ASTM D2471 in water bath.

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 - Bonding surfaces should be clean, dry and properly prepared. For optimum surface preparation consult the Hysol Surface Preparation Guide. The bonded parts should be held in contact until the adhesive is set

Curing - This adhesive may be cured for 1 hour @ >200°F/93°C to achieve normal performance.

Cleanup - It is important to remove excess adhesive from the work area and application equipment before it hardens. Denatured alcohol and many common industrial solvents are suitable for removing uncured adhesive. Consult your supplier's information pertaining to the safe and proper use of solvents.

Bond Strength Performance

Tensile Lap Shear Strength

Tensile lap shear strength tested per ASTM D1002 after curing for 1 hour @ 200°F/93°C. Adherends are 2024-T3 bare aluminum treated with phosphoric acid anodized per ASTM D3933.

<u>Test Temperature, °F/°C</u>	Typical Results	
	<u>psi</u>	<u>MPa</u>
-67/-55	3,500	24.1
77/25	5,000	34.5
180/82	4,000	27.6
250/121	3,200	22.0
300/149	3,000	20.7
350/177	2,500	17.2
400/204	1,700	11.7
450/232	1,200	8.3
500/260	800	5.5

Service Temperature

Service temperature is defined as that temperature at which this adhesive still retains 1000 psi/6.9 MPa using test method ASTM D1002 and is approximately 450°F/232°C.

Bulk Resin Properties

Compressive Properties - tested using 0.5 inch x 1 inch (12.7mm x 25.4mm) castings per ASTM D695 cured for 24 hours @ 77°F/25°C plus 1 hour @ 200°F/93°C.

	<u>psi</u>	<u>MPa</u>
Compressive Strength @ 77°F/25°C	24,000	165.4
Compressive Strength @ 350°F/177°C	12,000	82.7

Handling Precautions

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

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.

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Users should review the Materials Safety Data Sheet (MSDS) and product label for the material to determine possible health hazards, appropriate engineering controls and precautions to be observed in using the material. Copies of the MSDS and label are available upon request.

