



Hysol® TF 3056FR

Epoxy Paste Adhesive

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Description

Hysol TF 3056FR is a two-component low density potting compound which is fire resistant. It is self-extinguishing and its thixotropic characteristics make it ideal for honeycomb panels for edge close out, insert potting and aerodynamic smoothing and fairing.

Features

Fire Resistant
Meets Requirements of BMS 5-28, Type 28
Water Cleanup
Self-Extinguishing
Low Density
Good Compressive Strength
Passes 60-Second Vertical Burn

Uncured Adhesive Properties

	<u>Part A</u>	<u>Part B</u>	<u>Mixed</u>
Color	Green	White	Green
Viscosity @ 77°F/25°C	Viscous paste	Viscous paste	Viscous paste
Density (g/ml)	0.6	0.34	0.48
Shelf life @ <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	<u>Part A</u>	<u>Part B</u>
By Weight	100	36

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

Pot Life (100 gm mass) >60 minutes @ 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. Handling strength for this adhesive will occur in 24 hours @ 77°F/25°C, after which the support tooling or pressure used during cure may be removed. Since full bond strength has not yet been attained, load application should be small at this time.

Curing - This adhesive may be cured for 5 to 7 days @ 77°F/25°C or 5 hours @ 125°F/52°C to achieve normal performance. Accelerated cures up to 160°F/71°C (for small masses only) may be used as an alternative. For example, 1 hour @ 160°F/71°C will give complete cure.

Cleanup - It is important to remove excess adhesive from the work area and application equipment before it hardens. Unique to this adhesive, cleanup of uncured adhesive may be accomplished with warm water and soap.

Bond Strength Performance

Tensile Lap Shear Strength

Tensile lap shear strength tested per ASTM D1002 after curing for 5 hours @ 125°F/52°C. Adherends are 2024-T3 bare PAA anodized aluminum per ASTM D3933.

<u>Test Temperature, °F/°C</u>	<u>Typical Results</u>	
	<u>psi</u>	<u>MPa</u>
-67/-55	1,100	7.59
77/25	1,000	6.90

Bulk Resin Properties

Chemical Resistance*

	<u>Average Weight Increase, %</u>
77°F/25°C water - 24 hours	0.85
Monsanto low density hydraulic fluid - 24 hours	1.35
MIL-H-5606E hydraulic fluid - 24 hours	1.30
TT-S-735 Type III - 24 hours	1.30

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

Compressive Properties - tested using 0.5 inch/12.4 mm castings per ASTM D695.

Compressive Strength @ 77°F/25°C	2,000 psi	17.9 MPa
Compressive Modulus @ 77°F/25°C	164 ksi	1,130 MPa

Flammability - tested per BSS 7230, neat resin casting, 60 second vertical burn.

Extinguish Time

1.0 seconds

Burn Length

3.0 in/76.2 mm

Drip

-0-

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.

