

# LOCTITE EF 560 AERO

## Core Splice Epoxy Film

(KNOWN AS Hysol MA 560)

**INTRODUCTION**

LOCTITE EF 560 AERO is a low density, expanding, epoxy film adhesive. LOCTITE EF 560 AERO may be cured at 250°F (121°C) or 350°F (177°C) and is designed for service at temperatures from -67°F (-55°C) to 350°F (177°C).

**FEATURES**

LOCTITE EF 560 AERO offers the following features:

- Non-asbestos
- Dual Cure Capabilities: 250°F (121°C) or 350°F (177°C)
- Low Density: 0.25 lbs/ft<sup>2</sup> for 0.050" material (~1.22 kg/m<sup>5</sup> for 1.3mm material)
- Low slump characteristics
- Service temperatures of -67°F (-55°C) to 350°F (177°C)

**Uses**

Splicing and filling honeycomb core edge closeouts

Typical Technical Data	LOCTITE EF 560 AERO
Type:	Unsupported expandable epoxy film adhesive between liners of brown paper and red polyethylene
Color:	Yellow - Uncured, Light Brown - After Cure
Volatiles:	<1% by weight
Uncured Density:	55-60 lbs/ft <sup>3</sup> (880-976 kg/m <sup>3</sup> ) OR 0.25 lbs/ft <sup>2</sup> for 0.050" thick material (~1.22 kg/m <sup>5</sup> for 1.3mm material)
Cured Density:	25 lbs/ft <sup>3</sup> (400 kg/m <sup>3</sup> ;) when cured @ 250°F (121°C) 24 lbs/ft <sup>3</sup> (384 kg/m <sup>3</sup> ;) when cured @ 350°F (177°C)
Thickness:	.050" (1.3mm)
Form:	Up to 48" wide (1.22m)
Slump:	<0.1" (<2.54mm)
Expansion:	2.5 times original thickness
Shelf Life:	12 months @ 0°F (-18°C)
Out Time:	10 days @ 90°F (32°C)

# LOCTITE EF 560 AERO

## Core Splice Epoxy Film

(KNOWN AS Hysol MA 560)

### Performance Properties

Test Condition		Cured 60 Minutes @		Cured 60 Minutes @	
		250°F	121°C	350°F	177°C
°F	°C	PSI	MPa	PSI	MPa
<b>Tube Shear</b>					
75	24	980	6.8	1190	8.2
250	121	940	6.5	850	5.9
350	177	510	3.5	400	2.8
<b>Core Splice De-Lamination</b>					
75	24	45	.31	35	.24

Tube Shear Conditions: Heat up rate 5°F (2.8°C)/min, substrates: 5052 P2 etched aluminum, adhesive mass 38.5 grams Core De-laminations: Based on ASTM C 3635" x 5" x 2" aluminum core, 3" cell size and 0.0015N foil

### Application Method

Remove adhesive material from cold storage prior to use. Keep the material wrapped to prevent moisture from condensing on the adhesive. Allow adhesive to reach room temperature prior to use. Be sure parts to be bonded have been thoroughly cleaned and dried before bonding.

Cut adhesive to part size, remove the paper separator and apply to edge of honeycomb core. Remove the other paper and join to the other section of core or edge member. Assemble panel using desired adhesive. Panel is now ready for cure in a press, vacuum bag in an oven, or an autoclave. Follow recommended cure cycles.

### Curing Conditions

- 60 minutes @ 250°F (121°C) using a 2-8°F (1-4°C) per minute heat up rate
- 60 minutes @ 350°F (177°C) using a 2-8°F (1-4°C) per minute heat up rate

### Clean Up

Uncured adhesive may be removed effectively with ketone solvents in well-ventilated areas. Avoid contaminating uncured parts. Consult solvent container label/MSDS for proper safety and handling procedures.



# LOCTITE EF 560 AERO

## Core Splice Epoxy Film

(KNOWN AS Hysol MA 560)

---

### Storage

The shelf life of LOCTITE EF 560 AERO is 12 months @ 0°F (-18°C). This product has an out time of 10 days @ 90°F (32°C).

### 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.

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





# LOCTITE EF 560 AERO Core Splice Epoxy Film (KNOWN AS Hysol MA 560)

## 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, **Henkel Corporation specifically disclaims all warranties expressed or implied, including warranties of merchantability or fitness for a particular purpose, arising from sale or use of Henkel Corporation's products. Henkel 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 Henkel 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.

Rev. 9/2013



**Authorized Distributor**

1-800-375-0605

[www.rudolphbros.com](http://www.rudolphbros.com)

## Trademark usage

Except as otherwise noted, all trademarks in this document are trademarks of Henkel Corporation in the U.S. and elsewhere. © denotes a trademark registered in the U.S. Patent and Trademark Office.

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, **Henkel Corporation specifically disclaims all warranties expressed or implied, including warranties of merchantability or fitness for a particular purpose, arising from sale or use of Henkel Corporation's products. Henkel 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 Henkel 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.

