

**TECHNICAL DATA SHEET**  
**RESIWELD (R) STRUCTURAL ADHESIVE**

**DESCRIPTION**

This is a two component, room temperature curing adhesive with exceptional structural strength and physical properties at 180F.

SUGGESTED USES: General purpose bonding where high integrity bonds are needed. FE-0004 is QPL'd to MMM-A-134, Type I and meets the strength requirements of Type II. In addition, this product is QPL'd to MIL-A-8623 Type I & II.

**TYPICAL PHYSICAL PROPERTIES and GENERAL INFORMATION**

	Part A	Part B	Blend
RESIN SYSTEM	EPOXY	POLYAMIDE	EPOXY
COLOR	OFF-WHITE	TAN	TAN
VISCOSITY (cP (mPa.s))	25,000	60,000	62,500
WEIGHT PER U.S. GALLON (POUNDS)	10.4	11.4	10.9
SOLIDS (%)	100	100	100
BLENDING RATIO BY VOLUME (A/B)			100/100
BLENDING RATIO BY WEIGHT (A/B)			100/110
SHELF LIFE	ONE YEAR	ONE YEAR	
MAX. EXOTHERM, 100-200G MASS (DEGREES C)			37
GEL TIME SAMPLE VOLUME IN FLUID OZ. (FL.OUNCES)			6
GEL TIME TEMPERATURE (F.) (DEGREES F.)			77
GEL TIME IN MINUTES (MINUTES)			90

**PERFORMANCE CHARACTERISTICS**

Evaluation of FE-0004 cured 2 hours at 158F

Average Tensile Shear Strength on 2024-T3 Aluminum

-67F	3,600 psi
77F	3,850 psi
180F	2,725 psi
After 30 days at 95% RH and 120F	4,000 psi
After 7 days immersion is std. Test Fluid #3	4,050 psi
Izod Impact Test	0.3 foot lbs./in. notch
Climbing Drum Peel	31 lbs./inch width
Average Peel Torque	15.5 inch lbs./inch width
T-peel (MMM-A-132)	2.5 lbs./inch width
Cleavage Strength	1,375 lbs./inch width
Heat Deflection Temperature	180F
Compressive Strength	13,500 psi
Hardness: Barcol	70-75
Shore D	90
Flexural Strength	5,800 psi
Coefficient of Linear Thermal Expansion	
-7 to 32F	26 x 10 exp -6/deg. F
32 to 86F	32 x 10 exp -6/deg. F
86 to 140F	36 x 10 exp -6/deg. F
Average -7 to 140F	31 x 10 exp -6/deg. F
Thermal conductivity at 33°C	0.00099 cal/sec.cm x °C
Glass Transition Temperature (TMA)	73C

**ELECTRICAL PROPERTIES**

Dielectric Properties,	60 Hz, 23C	3.75
Dielectric Properties,	100 Hz, 23C	3.62
Dissipation Factor,	60 Hz, 23C	0.00642
Dissipation Factor,	100 Hz, 23C	0.015
Volume Resistivity,	50% R.H., 23C	6.9e + 15

**APPLICATION AND EQUIPMENT SUGGESTIONS**

Suitable two part metering and mixing equipment is available. Contact your H.B. Fuller representative for suggested application equipment to suit your specific needs.

**DIRECTIONS FOR USE**

**SURFACE PREPARATION:** Surfaces must be clean, dry and free from grease, oil, paint, wax and weak oxide films and other surface contaminants. Chemical etching, sanding or grit blasting often gives the best results.

**PROPORTIONING AND MIXING:** Just prior to using, blend the two components, Part A and Part B, in the ratio above. Stir the two components together thoroughly, being certain to scrape in all material from the walls and bottom of the mixing container. Materials can be hand stirred. Mechanical mixing is preferable, but should be carried out at slow speeds (about 300 rpm), taking as little air as possible into the adhesive batch.

**APPLICATION:** Spread a thin layer of the mixed adhesive on one or both of the parts to be bonded. Once the adhesive is applied, no open time is necessary. The surfaces can be assembled immediately. Parts should be assembled while the adhesive is still wet to the touch and before it sets. The individual parts, the ambient temperature and the adhesive itself will dictate the open time permitted.

**CURE SCHEDULE:** 7-14 days at 77F  
2-3 hours at 158F  
30-45 minutes at 250F

**STORAGE AND HANDLING**

Use good personal hygiene. Avoid eye and skin contact. Wash contaminated clothing before reuse. Store material in a closed container in a cool, dry place.

**CAUTION**

Potential sensitizer. Eye and skin irritant. Vapors harmful. Consult the container label and Material Safety Data Sheets for additional cautionary information before using.

**LIMITED WARRANTY AND TERMS**

H.B. Fuller Company ("Fuller") warrants that, for a Warranty Period of one year (or the period specified on the applicable Technical Data Sheet, whichever is less) from the date of shipment from Fuller to the Initial Purchaser, that this Fuller product was manufactured in accordance with Fuller's specifications in effect on the date of manufacture. These specifications are available upon request. This Warranty does not cover test data, or any defects, damages or other harms caused to any extent or in any way by failure to follow applicable Fuller instructions, if any, or abuse or misuse of the product.

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**LIMITATIONS OF REMEDIES AND DAMAGES** -- FOR ANY VALID CLAIM PRESENTED UNDER THE LIMITED WARRANTY, Fuller WILL REPLACE THE PRODUCT, OR AT ITS OPTION, REFUND THE PURCHASE PRICE. THIS REPLACEMENT/REFUND REMEDY IS THE PURCHASER'S SOLE AND EXCLUSIVE REMEDY AGAINST Fuller. THE PURCHASER AGREES THAT NO OTHER REMEDY (INCLUDING BUT NOT LIMITED TO LOST PROFITS, LOST SALES, INJURY TO PERSON OR PROPERTY OR ANY OTHER INCIDENTAL OR CONSEQUENTIAL LOSS) SHALL BE AVAILABLE TO PURCHASER FOR CLAIMS ARISING OUT OF ANY USE OF THE PRODUCT REGARDLESS OF THE LEGAL THEORY (CONTRACT, TORT OR OTHER). IN NO EVENT WILL Fuller BE OBLIGATED TO PAY DAMAGES TO PURCHASER IN ANY AMOUNT EXCEEDING THE PRICE THAT THE PURCHASER PAID FOR THE PRODUCT.

**LIMITATION OF ACTIONS AND VENUE** -- Any claim made or action commenced by Purchaser under Fuller's limited warranty as set forth herein must be brought within one year from the date of shipment from Fuller to the Purchaser. Purchaser agrees that all disputes arising from Fuller's sale of product to Purchaser shall be brought, if at all, in and before a court located in the State of Minnesota, to the exclusion of the courts of any other state.

**CONDITIONAL ACCEPTANCE** -- Fuller's acceptance of Purchaser's order for this product is expressly conditional on Purchaser's assent to terms and conditions set forth herein.

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**ADEQUATE TESTS:** The information contained in this bulletin we believe is correct to the best of our knowledge and tests. The recommendations and suggestions herein are made without guarantee or representation as to results. We recommend that adequate tests be made in your laboratory or plant to determine if this product meets all of your requirements.