H.B. Fuller Company
Research & Development Laboratory

1200 Willow Lake Boulevard
P.O. Box 64683
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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 (BY VOL.)	1.0	1.0	1:1
SHELF LIFE	12 Months	12 Months	
GEL TIME AT 77F(VOL.IN FL.OZ./TIME)			6/60-120 Min.
MAX. EXOTHERM, 100-200G MASS (DEGREES C)			37

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 in std Test Fluid #3	4,050 psi

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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 33C	0.00099 cal/cm.sq.c
Glass Transition Temperature (TMA)	73C

Electical 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.

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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 give 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 preferrable, 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.