



H.B Fuller Company
P.O. Box 64683
St. Paul, MN 55154-09683

EY3804
PRODUCT NUMBER

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TECHNICAL DATA SHEET

EY3804

GRAPHITE COMPOSITE REPAIR COMPOUND

DESCRIPTION

EY3804 A/B is a low viscosity, two-component epoxy system that offers low temperature cure, high temperature strength, and excellent resistance to hot water immersion. These properties make EY3804 an excellent choice for field repair of composite components.

EY3804 may be considered as a permanent repair for service temperatures to 200F. It is also qualified to Boeing specification BMS 8-301J, Class 2.

MIX RATIO

Mix 100 parts by weight of EY3804A Resin with 66 parts by weight of EY3804B hardener.

POT LIFE

The pot life of EY3804 A/B is 40-50 minutes in a 166 gram mass.

CURE CYCLE

EY3804 was designed as a room temperature curing epoxy to develop 300F strength with short term aging. Cure can be greatly accelerated with moderate heat, as with heat lamps or a field repair heat source. A heating time of three hours at 150F in the bond line will provide a full cure.

PHYSICAL PROPERTIES

Property	Part A	Part B	Blend
BLENDING RATIO BY WEIGHT	100	66	
COLOR	AMBER	BLACK	
COMPRESSIVE STRENGTH, ASTM D0695, COMPRESSIVE STRENGTH AT 77F (lb-f/ft ²)			5,000
DENSITY, ASTM D0792, WEIGHT PER U.S. GALLON (lbmass/gal)	10.17	8.07 – 8.27	
GEL TEMPERATURE, TMMS144, GEL TIME TEMPERATURE (F.) (deg. F)			76 – 78
GEL TIME, GEL TIME IN MINUTES (166 GRAMS MIN: 165 MAX: 167) (minute)			40 – 44
HARDNESS, SHORE D, HARDNESS - SHORE D			81 – 83
ODOR	NEUTRAL	FISHY	
SOLID CONTENT (NON-VOLATILES), TMWB052, SOLIDS (percent)		100	
VISCOSITY, TMMS001, VISCOSITY (cP)	6,000	1,650	3,900



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<u>*TYPICAL LAMINATE PROPERTIES</u>	<u>VALUE</u>
Compressive strength, psi	47,315
Compressive modulus, psi	6.1 x 10+6
Flexural strength, psi	113,473
Flexural modulus, psi	3.2 x 10+6
Tensile strength, 77F psi	7.8 x 10+6
Interlaminar shear strength, psi	6,000

*12 plies of Thornel 300, 3K 12.5 x 12.5 plain weave, 0.009 in per ply. Vacuum bagged and cured 2 hours/130F plus 2 hours/250F.

STORAGE

Part A <40F = 6 months
>40-80F = 3 months

Part B <40F = 12 months
>40-80F = 12 months

SAFETY AND HANDLING

As with all resin systems, liquid and vapor may cause irritation to some people. Avoid contact with skin and use adequate ventilation. Wash skin with soap and water. Flush eyes with water copiously and get medical attention.

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.

Since emptied containers retain product residue, follow label warnings even after container is emptied. Storage in areas above 80 deg. F may reduce shelf life. Consult Material Safety Data Sheet for further information.

CAUTION

Part A: May cause eye and skin irritation. Potential skin sensitizer.

Part B: Warning: May cause burns. Since emptied containers retain product residue, follow label warnings even after container is emptied.



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LIMITED WARRANTY

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.

WARRANTIES DISCLAIMED -- THE WARRANTY STATED IN THE PARAGRAPH ABOVE IS IN PLACE OF ALL OTHER WARRANTIES, EXPRESS OR IMPLIED. Fuller EXPRESSLY DISCLAIMS ANY OTHER WARRANTIES, INCLUDING WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE.

ALTHOUGH Fuller MAY HAVE SUGGESTED THE PRODUCT OR DEVELOPED THE PRODUCT AT THE PURCHASER'S REQUEST, IT IS THE PURCHASER'S RESPONSIBILITY TO TEST AND DETERMINE THE SUITABILITY OF THE PRODUCT FOR THE PURCHASER'S INTENDED USE AND PURPOSE, AND PURCHASER ASSUMES ALL RISK AND LIABILITY WHATSOEVER REGARDING SUCH SUITABILITY.

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.

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.