



TRA-BOND™ FDA15™

May 2009

PRODUCT DESCRIPTION

TRA-BOND™ FDA15™ provides the following product characteristics:

Technology	Epoxy
Appearance	Clear
Components	Two part - Resin & Hardener
Mix Ratio, by weight - Resin : Hardener	100 : 20
Product Benefits	• Low viscosity • Low permeability to gases and vapors • Low temperature cure • Room temperature cure
Cure	Heat cure or Room temperature cure
Application	Medical
Operating Temperature	-70 to 140 °C
Typical Medical Device Application	Catheters, Hearing aids, Dental products and Other biomedical instruments and devices
Other Application Areas	Food preparation processing and packaging

TRA-BOND™ FDA15™ is designed for bonding and coating applications. TRA-BOND™ FDA15™ bonds offer resistance to water, weather, galvanic action, petroleum solvents, lubricants, fuels, mild acids and alkalis and other organic and inorganic compounds.

USP CLASS VI BIOLOGICAL REACTIVITY TESTING

TRA-BOND™ FDA15™ was originally formulated in accordance with Title 21, U.S. Code of Federal Regulations, Food and Drug Administration (FDA) Chapter 1, Sections 175.105 and 175.300. In 1997, this product was also tested by an independent laboratory in accordance with USP Biological Reactivity Tests, In Vivo, Classification VI, and found to be in compliant at that time. This product has not, however, been compared to revisions of these regulations over time.

TYPICAL PROPERTIES OF UNCURED MATERIAL

Thixotropic Index (5/50 rpm)	1.0
Specific Gravity, mixed	1.15
Reactive solids contents, %	100
Pot Life, minutes	25
Flash Point - See MSDS	

Mixed Properties:

Mixed Viscosity, cP @ 25°C	4,500
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TYPICAL CURING PERFORMANCE

Cure Schedule

24 hours @ 25°C or
1 to 4 hours @ 65°C

Percent Volatiles

VOC, grams/liter 3.0

The above cure profiles are guideline recommendations. Cure conditions (time and temperature) may vary based on customers' experience and their application requirements, as well as customer curing equipment, oven loading and actual oven temperatures.

TYPICAL PROPERTIES OF CURED MATERIAL

Physical Properties:

Coefficient of Thermal Expansion, cm/cm/°C	5.50×10 ⁻⁵
Glass Transition Temperature (Tg), ultimate, °C	100
Hardness, Shore D	89
Elongation, %	4
Water Absorption, after 24 hours saturation, %	0.23

Electrical Properties:

Volume Resistivity, ohm/cm @ 25°C	2.00×10 ¹⁴
Dielectric Strength, volts/mil	420
Dielectric Constant @ 25°C :	
1kHz	4.3
Dissipation Factor @ 25°C:	
1kHz	0.02

TYPICAL PERFORMANCE OF CURED MATERIAL

Lap Shear Strength, psi:

4 hours @ 65°C

Substrate	
Aluminum to Aluminum	2,100

GENERAL INFORMATION

For safe handling information on this product, consult the Material Safety Data Sheet, (MSDS).

DIRECTIONS FOR USE

1. Carefully clean and dry all surfaces to be bonded.
2. Remove clamp and thoroughly mix the TRA-BOND™ FDA15™ epoxy adhesive system components in the handy BIPAX mixing-dispenser package until color is uniform throughout.



3. Apply this completely mixed adhesive to the prepared surfaces, and gently press these surfaces together. Contact pressure is adequate for strong, reliable bonds; however, maintain contact until adhesive is completely cured.
4. Some separation of components is common during shipping and storage. For this reason, it is recommended that the contents of the shipping container be thoroughly mixed prior to use.
5. Some ingredients in this formulation provided in BIPAX, TRA-PAX and bulk packaging may crystallize when subjected to low temperature storage. A gentle warming cycle of 51°C for 30 minutes prior to mixing components may be necessary. Crystallized epoxy components do not react as well as liquid components and should be redissolved prior to use for best results.

Not for product specifications

The technical data contained herein are intended as reference only. Please contact your local quality department for assistance and recommendations on specifications for this product.

Storage

The expiration date for pre-mixed and frozen materials is based upon dry storage conditions at or below the temperature indicated on each package. Store product in the unopened container in a dry location. Storage information may be indicated on the product container labeling.

Optimal Storage: 27 °C

Material removed from containers may be contaminated during use. Do not return product to the original container. Henkel Corporation cannot assume responsibility for product which has been contaminated or stored under conditions other than those previously indicated. If additional information is required, please contact your local Technical Service Center or Customer Service Representative. Contents may separate during storage. Resin or hardener .

Conversions

$(^{\circ}\text{C} \times 1.8) + 32 = ^{\circ}\text{F}$
 $\text{kV/mm} \times 25.4 = \text{V/mil}$
 $\text{mm} / 25.4 = \text{inches}$
 $\text{N} \times 0.225 = \text{lb}$
 $\text{N/mm} \times 5.71 = \text{lb/in}$
 $\text{N/mm}^2 \times 145 = \text{psi}$
 $\text{MPa} \times 145 = \text{psi}$
 $\text{N}\cdot\text{m} \times 8.851 = \text{lb}\cdot\text{in}$
 $\text{N}\cdot\text{m} \times 0.738 = \text{lb}\cdot\text{ft}$
 $\text{N}\cdot\text{mm} \times 0.142 = \text{oz}\cdot\text{in}$
 $\text{mPa}\cdot\text{s} = \text{cP}$

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.

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Reference 0.0