



TRA-BOND 2116

June 2010

PRODUCT DESCRIPTION

TRA-BOND 2116 provides the following product characteristics:

Technology	Epoxy
Color	Milky, translucent
Cure	Room temperature cure or Heat cure
Operating Temperature	-60 to 130 °C
Product Benefits	<ul style="list-style-type: none"> • Low vapor pressure • Thixotropic • Solvent-free • Excellent environmental resistance • Electrically Insulating • Room temperature cure • Non-sag • Two component
Components	Two component - requires mixing
Mix Ratio, by weight - Resin : Hardener	100 : 22
Application	Staking compound
Typical Assembly Applications	Critical electronics applications, Aerospace applications and Industrial applications
Substrates	Glass, Rigid plastics, Ceramic, Metals and Wood

TRA-BOND 2116 adhesive is designed for bonding and enhancing the mechanical and structural rigidity of assemblies. TRA-BOND 2116 bonds offer resistance to weather, galvanic action, most petroleum solvents, lubricants, gasoline, jet fuel, alcohol, salts and mild acids and alkalis.

TRA-BOND 2116 passes NASA outgassing standards.

TYPICAL PROPERTIES OF UNCURED MATERIAL

Viscosity @ 25 °C, cP:	
After Mixing	100,000
Specific Gravity, mixed	1.26
Pot Life , minutes	30
Flash Point - See MSDS	

TYPICAL CURING PERFORMANCE

Cure Schedule

24 hours @ 25°C

Alternative Cure Schedule

4 hours @ 65°C

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	5.5×10 ⁻⁰⁵
Glass Transition Temperature (Tg), °C	115
Hardness, Shore D	90
Izod Impact Strength, ft-lb/in. of notch	0.22
Reactive solids contents, %	100

Electrical Properties:

Volume Resistivity, ohms-cm:	
@ 25°C	6.0×10 ¹³
@ 100°C	1.0×10 ¹⁰
Dielectric Strength, volts/mil	415
Dielectric Constant @ 25°C :	
1kHz	4.5
Dissipation Factor @ 25°C:	
1kHz	0.01

Outgassing Properties:

Total Mass Loss, %	1.01
Volatile Condensable Material (VCM), %	0.05

TYPICAL PERFORMANCE OF CURED MATERIAL

Lap Shear Strength, psi:

1 hour @ 65°C

Substrate	
Aluminum to Aluminum	2500

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 2116 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 125°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 in bulk containers (e.g., quarts, gallons) should be thoroughly mixed prior to combining them to obtain all the benefits of the properties designed into the formulation.

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 0.1