



ECCOBOND A401

May 2011

PRODUCT DESCRIPTION

ECCOBOND A401 provides the following product characteristics:

Technology	Epoxy
Appearance	Ivory
Product Benefits	<ul style="list-style-type: none"> • One component • Thermally conductive • High temperature properties • High bond strength at room temperature • Excellent hot strength • Excellent long term heat and moisture resistance • High dielectric strength
Cure	Heat cure
Filler Type	AluminumOxide
Application	Thermally conductive adhesive
Typical Package Application	Power devices and Heat producing components
Surfaces	Metals, Plastics and Glass
Operating Temperature	-40 to 155 °C

ECCOBOND A401 is a rigid thermally conductive adhesive recommended for the assembly of components that require thermal management. It contains aluminum oxide filler and is a Class F (155°C) insulator with 100% solids.

TYPICAL PROPERTIES OF UNCURED MATERIAL

Viscosity, Brookfield, mPa·s (cP)	85,000
Specific Gravity	1.65 to 1.75
Shelf Life:	
@ 40°C, weeks	2
@ 25°C, months	2
@ 0°C, months	6

Flash Point - See MSDS

TYPICAL CURING PERFORMANCE

Cure Schedule

60 minutes @ 120°C or
30 minutes @ 140°C or
15 minutes @ 160°C or
5 minutes @ 180°C

NOTE: No adverse exotherm effects when cured at 100°C in masses up to about 200 grams.

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:

Thermal Conductivity, W/mk	0.5
Hardness Shore D:	
@ 25°C	80

@ 120°C 60

Electrical Properties:

Volume Resistivity, ohms-cm:	
1kHz	≤6×10 ¹⁴
Dielectric Strength, kV/mm	≥17
Dielectric Constant:	
1kHz	4.0

TYPICAL PERFORMANCE OF CURED MATERIAL

Tensile strength, MPa:

@ 25°C ≥18

GENERAL INFORMATION

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

DIRECTIONS FOR USE

1. Complete cleaning of the substrates should be performed to remove contamination such as oxide layers, dust, moisture, salt and oils which can cause poor adhesion or corrosion in a bonded part.
2. Some filler settling 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. Power mixing is preferred to ensure a homogeneous product.
3. Apply adhesive to all surfaces to be bonded and join together.
4. In most applications only contact pressure is required.

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

Store product in the unopened container in a dry location. Storage information may be indicated on the product container labeling.

Optimal Storage: 0 °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.



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

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Reference 0.2