

ABLESTIK CE 8500 SPEC 100

January 2013

PRODUCT DESCRIPTION

ABLESTIK CE 8500 SPEC 100 provides the following product characteristics:

Technology	Modified epoxy
Appearance	Silver
Cure	Heat cure
Product Benefits	<ul style="list-style-type: none">• Electrically conductive• One component• Solvent-free• Low stress• Flexible• Excellent high temperature performance
Filler Type	Silver
Operating Temperature	-45 to 230 °C
Typical Applications	Substrate Attach, Heat sink attach, Sensor attach, Component attach in hybrid packages

ABLESTIK CE 8500 SPEC 100 is an electrically conductive adhesive designed to provide low stress interconnects. It's 'modified epoxy' resin base provides good adhesion to a variety of surfaces, and is suitable for bonding large dies as well as bonding hybrid circuits to various substrates. ABLESTIK CE 8500 SPEC 100 provides good thermal conductivity and can withstand a wide range of operating temperatures. ABLESTIK CE 8500 SPEC 100 is the lower viscosity version of ABLESTIK CE 8500.

TYPICAL PROPERTIES OF UNCURED MATERIAL

Viscosity, ASTM D2393, mPa·s (cP):

Spindle TC, speed 10 rpm 45,000

Density, ASTM D792, g/cm³ 3.0

Shelf Life:

@ -25 to -18°C, days 182

@ 18 to 25°C, days 14

Flash Point - See MSDS

TYPICAL CURING PERFORMANCE**Cure Schedule**

120 minutes @ 110°C or

90 minutes @ 120°C or

40 minutes @ 150°C or

15 minutes @ 175°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:**

Thermal Conductivity, ASTM D2214, W/(m·K) 4

Hardness, Shore A, ASTM D2240 88

Electrical Properties:

Volume Resistivity, ASTM D257, ohms-cm $\leq 1 \times 10^{-3}$

GENERAL INFORMATION

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

DIRECTIONS FOR USE

1. Complete cleaning of the components and substrates should be performed to remove contamination such as dust, moisture, salt and oils which can cause electrical failure, poor adhesion or corrosion in an embedded part
2. 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
3. To ensure a void-free embedment, vacuum deairing or degassing should be performed to remove any entrapped air introduced during the mixing operation
4. Pump-down or pull vacuum on the mixture to achieve an ultimate vacuum or absolute pressure of torr or mm Hg. The foam will rise several times in the liquid height and then subside
5. Continue vacuum deairing until most of the bubbling has ceased. This usually takes
6. Pour mixture into cavity or mold
7. Gentle warming of the mold or assembly reduces the viscosity. This improves the flow of the material into the unit having intricate shapes or tightly packed coils or components
8. Further vacuum deairing in the mold may be required for critical applications

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: -18 °C to -25°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

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

Disclaimer

Note:

The information provided in this Technical Data Sheet (TDS) including the recommendations for use and application of the product are based on our knowledge and experience of the product as at the date of this TDS. The product can have a variety of different applications as well as differing application and working conditions in your environment that are beyond our control. Henkel is, therefore, not liable for the suitability of our product for the production processes and conditions in respect of which you use them, as well as the intended applications and results. We strongly recommend that you carry out your own prior trials to confirm such suitability of our product.

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