

Ablestik™**ABLEFILM® 5020K**

March 2009

PRODUCT DESCRIPTION

ABLEFILM® 5020K provides the following product characteristics:

Technology	Epoxy Film
Appearance	White
Cure	Heat cure
Product Benefits	<ul style="list-style-type: none"> • Thermally conductive • High purity
Application	Assembly
Carrier Type	Glass fabric
pH	5.6
Typical Assembly Applications	Substrate attach

ABLEFILM® 5020K high purity adhesive is designed for substrate attach.

MIL-STD-883

ABLEFILM® 5020K meets the requirements of MIL-STD-883, Method 5011.

TYPICAL PROPERTIES OF UNCURED MATERIAL

Work Life @ 25°C, months	6
Shelf Life @ -40°C, year	1

Flash Point - See MSDS

TYPICAL CURING PERFORMANCE**Cure Schedule**

1 hour @ 150°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 ppm/°C:	
Below Tg	45
Above Tg	270
Glass Transition Temperature, °C	109
Thermal Conductivity @ 121°C, W/mK	0.7
Extractable Ionic Content, @ 100°C ppm:	
Chloride (Cl-)	60
Sodium (Na+)	20
Potassium (K+)	1
Water Extract Conductivity, µmhos/cm	10
Weight Loss @ 300°C, %	0.3

Electrical Properties:

Volume Resistivity, ohms-cm	8×10 ¹⁴
Dielectric Constant @ 1kHz	4.4
Dissipation Factor @ 1kHz	0.005

TYPICAL PERFORMANCE OF CURED MATERIAL**Lap Shear Strength:**

Al to Al @ 25°C, psi	3,000
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GENERAL INFORMATION

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

THAWING:

1. Allow container to reach room temperature before use.
2. DO NOT open the package before contents reach ambient temperature.
3. Any moisture that collects on the thawed package should be removed prior to opening the package.

DIRECTIONS FOR USE

1. Place precut adhesive film between clean surfaces to be bonded.
2. Assemble components.
3. Apply spring loaded clamp or dead weight to provide continuous pressure of at least 2 to 10 psi during cure cycle.
4. Place assembly in a preheated oven and cure at the recommended cure schedule.

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

ABLEFILM® products can be stored at -40°C for up to one year. The shelf life of the film is only valid when the material has been stored at the specified storage conditions. Incorrect storage conditions will degrade the performance of the material in final cured properties. Avoid flexing film when frozen.

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 0.1