



# ATE-46446™

## DEFINITION

C6-56964

ATE-46446™ is a thermally conductive, room temperature curing adhesive for heat sinks and other applications where a high degree of thermal conductivity is required.

## PRODUCT DESCRIPTION

Appearance	Viscous Liquid
Odor	Faint
Color	Grey

Property	Measurement	Methods
Viscosity, mixed	8,000 cp	Brookfield HBT, SSA, Spindle # 27 @ 10 rpm, 25°C

Other information			
Pot life time @ 25± 2°C	45 hours		
Mix Ratio		<b>Weight</b>	<b>Volume</b>
	Part A	100	100
	Part B	9	18
Curing cycle	<ul style="list-style-type: none"> <li>• 1 hour @ 65°C</li> <li>• 20 minutes @ 85°</li> <li>• 24 hours at 25°C</li> <li>• Fixture/handling strength 3 hours at 25°C</li> </ul>		
Storage stability	One year at 25°C		

## APPLICATION PROPERTIES

- Check ATE-46446™ Part A for filler settling. If filler settling has occurred, warm to 100°F and mix with spatula or other suitable device such as paint blade or shaker.
- To prepare small quantities of ATE-46446™ (100 g or less) add Part B to Part A at about 38°C (100°F), mix thoroughly then vacuum degas at 0.5mm Hg or let stand at room temperature for 10-15 minutes before using.

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- For larger amounts of **ATE-46446™**, spread the mixed material onto a horizontal plate or surface, no thicker than 1/4 inch, and let stand until most air has escaped, or degas the mixed material at 29 inches Hg in a container 3-4 times larger than the volume mixed.
- Since the cure reaction is exothermic, never mix more than 2,000 g of **ATE-46446™** at one time. Once a large batch is mixed the **ATE-46446™** must be used within 30 minutes after mixing; otherwise, a dangerous exotherm may develop!! Any questions about this, please contact Protavic America, Inc.

### **TYPICAL PROPERTIES OF THE CURED SYSTEM**

The properties set out below were obtained after curing for 24 hours at 25°C. They were determined following measurements carried out in the laboratory over a small number of tests. They are values given by way of guidance, and do not constitute a guarantee. It will be for the user, in all cases, to carry out their own tests to determine whether **ATE-46446™** can be used for the particular application they have in mind.

#### **1 – PHYSICO-CHEMICAL PROPERTIES**

<b>Properties</b>	<b>Methods</b>	<b>Units</b>	<b>Typical values</b>
Lap shear to AL	ASTM D 3163	PSI	4.000
Durometer, Shore D	ASTM D2240	--	85
Shrinkage on cure		%	0.0
NASA Outgassing	ASTM 595		0.53% TML 0.09%CVCM 0.20% WVR

#### **2- THERMAL PROPERTIES**

<b>Properties</b>	<b>Methods</b>	<b>Units</b>	<b>Typical values</b>
Thermal Conductivity @ 25°C		W/m·K	2.2
Thermal Conductivity @ 100°C		W/m·K	1.49

**NOTE:** *Thermal conductivities on aluminum-bonded heat-sinks are much higher and depend on film thickness and/or geometry.*

#### **PRECAUTIONS IN USE**

Please refer to the material safety data sheet.

#### **PACKAGING**

Please contact Protavic America, Inc for **ATE-46446™** packaging information.

The information contained in this data sheet corresponds to the present state of our knowledge; it is intended for your guidance but we are not bound by it since we are not in a position to exercise control over the manner in which our products are used. Moreover; the attention of the user is drawn to the risks that could possibly occur should a product be used for an application other than that for which it is intended.