



REV 3.1

ATE-46440™

C6-56204A
C6-56205B

DEFINITION

ATE-46440™ is a thermally conductive, low heat curing adhesive for heat sinks and other applications where a high degree of thermal conductivity is required. This product is **designed for applications which are exposed to high heat ($\geq 200^{\circ}\text{C}$)** during post manufacturing steps such as heat cure powder coating.

PRODUCT DESCRIPTION

Appearance	Viscous Liquid
Odor	Faint
Color	Grey

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

Other information			
Pot life time @ 25± 2°C	4 hours		
Mix Ratio		Weight	Volume
	Part A	100	100
	Part B	7	5.6
Curing cycle	<ul style="list-style-type: none"> • 1 hour @ 150°C best high temp. • 2 hours @ 85° • 3 hours @ 75°C • 24 hours at 25°C plus 1 hour at 95°C 		
Storage stability	One year at 25°C		



APPLICATION PROPERTIES

- Check **ATE-46440™ 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-46440™** (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.
- For larger amounts of **ATE-46440™**, spread the mixed material onto a horizontal plate or surface, no thicker the 1/4 inch, and let stand until most air has escaped, or degas the mixed material at 0.5 mm 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-46440™** at one time. Once a large batch is mixed the **ATE-46440™** 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-46440™** can be used for the particular application they have in mind.

1 – PHYSICO-CHEMICAL PROPERTIES

Properties	Methods	Units	Typical values
Lap shear to AL	ASTM D 3163	PSI	2700 1 hour @150°C
			3200 after 1.5 hours at 200°C
Durometer, Shore D	ASTM D2240	--	92
Shrinkage on cure		%	0.0
NASA Outgassing	ASTM 595		0.53% TML 0.09% CVCM 0.20% WVR

2- THERMAL PROPERTIES

Properties	Methods	Units	Actual values
Thermal Conductivity @ 25°C	Hot Disk (TPS500)	W/m°K	1.925

***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-46440™** 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.

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