ANE-26144

6-56977
6-17085

DEFINITION

ANE-26144™ epoxy adhesive is a low viscosity, fast curing, and electrically insulating adhesive for metals, plastics, ceramics, ferrites, and underfill applications. Adhesion to metals, ceramics and FR4 type substrates along with its thermal and chemical stability ensure good protection against environmental factors for electronic components. Depending upon customer requirements, **ANE-26144™** is available as a one- or a two-component system.

PRODUCT DESCRIPTION

Appearance	Liquid
Odor	Faint
Color	Amber

Property	**Standards**	**Methods**
Viscosity	6,000-7,000 mPa·s	Brookfield HBT, Spindle 27, Small Sample Adaptor, 20 rpm, 25°C

Other information	
Work life time @ 25 ± 2ºC	3 days
Specific gravity @ 25ºC (g/cm³)	Part A: 1.15 Part B: 0.97 A/B Mixed: 1.13
Possible curing cycles	50-60 minutes at 100°C 30 minutes at 125ºC 15 minutes at 150ºC <1 minute at 180°C
Storage stability (one-component)	6 months at 0ºC 1 year at –40°C

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APPLICATION PROPERTIES

- The consistency of the **ANE-26144™** is well suited for micro-dispensers. The rheology allows for good wetting of surfaces in contact with the resin. It also provides good adhesion to substrates.

- This non-thixotropic, fast curing system offers high strength and thermal shock resistance from approximately -40ºC to 150ºC.

APPLICATION RECOMMENDATIONS

- **ANE-26144™** can be supplied as a one-component system premixed and frozen, ready to use in syringes designed to fit on a micro-dispenser, which has the advantage of avoiding handling operations that encourage the entrainment of air bubbles.

- If supplied as a one-component, **ANE-26144™** should be removed from the freezer 15 to 30 minutes before use to allow it to reach a temperature of between 18 and 22°C.

- When **ANE-26144™** is supplied as a two-component system, as with many resin products, crystallization of the resin can happen while in storage. **ANE-26144™** can be returned to its original state --without any performance and or quality loss-- by heating to 60ºC for 1-2 hours. When all the crystals have melted the material should not re-crystallize for 1-2 weeks. To prevent re-crystallization, store in freezer until ready to use.

- Due to the high reactivity of the cure system it is recommended that **ANE-26144™** be cured in thin films and never more than two grams at a time in a single mass.

TYPICAL PROPERTIES OF THE CURED SYSTEM

The properties set out below were obtained after curing for 15 minutes at 150ºC. 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 the **ANE-26144™** resin can be used for the particular application the user has in mind.

PHYSICO-CHEMICAL PROPERTIES

Properties	**Methods**	**Units**	**Typical values**
Shore D hardness	ASTM D2240	-----	88
Lap shear to Al, 25°C	ASTM D3163	psi	3,000-3,200
Lap shear to Al, 75°C	ASTM D3163	psi	1,400-1,500
Lap shear to Al, 100°C	ASTM D3163	psi	1,000-1,200
Lap shear to Al, 125°C	ASTM D3163	psi	600-700
Chlorine Content	MIL-STD 883	µg/g	6
Sodium Content	MIL-STD 883	µg/g	3
Potassium Content	MIL-STD 883	µg/g	< 1

THERMAL PROPERTIES

Properties	**Methods**	**Units**	**Typical values**
Glass transition temperature Tg	DSC 1	°C	137

ELECTRICAL PROPERTIES

Properties	**Methods**	**Units**	**Typical values**
Volume Resistivity • 100 V • 500 V	ASTM D257	Ω-cm	• 6.2×10^{15} • 4.6×10^{15}
Dielectric Constant • 120 Hz • 1000 Hz	ASTM D150	--	• 3.5 • 3.4
Dissipation Factor • 120 Hz • 1000 Hz	ASTM D150	--	• 0.007 • 0.008
Dielectric Strength	ASTM D149	V/mil V/mm	• 436 • 17

PRECAUTIONS IN USE

Refer to the material safety data sheet.

PACKAGING

Depending upon customer requirements, **ANE-26144™** is available as a one- or a two-component system.

Product Name	**Description**
ANE-26144-BC-005	5 gram **Divi-Pax™**
ANE-26144-TS-055	55 mL 10:1 **MIXPAC™**
ANE-26144-TS-200	200 mL 10:1 **MIXPAC™**
ANE-26144-TS-400	400 mL 10:1 **MIXPAC™**
ANE-26144-002	Quart Kit
ANE-26144-004	Gallon Kit
ANE-26144-005	5 Gallon Kit
ANE-26144-010	10 g Frozen, one-component
ANE-26144-030	30 g Frozen, one-component