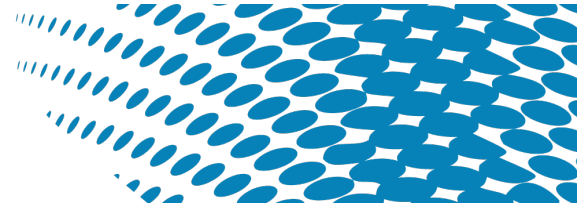


# TS1334

## High Conductivity Stretchable Adhesive



### Product Description

TS1334 is a silver filled, solvent free, one component stretchable adhesive with superior electrical conductivity that can undergo strains of up to 40% post cure. It can be deposited using stencil, syringe, or jet dispensing. The adhesive was designed for bonding large components to compliant substrates and remains stretchable following thermal cure. TS1334 accommodates thermomechanical stresses arising from differences in the thermal expansion coefficients between components. This highly compliant material lowers the stress risers at the bonded interface and accommodates bending and flexing in a variety of applications. It is also highly thermally conductive and can be used in a broad range of applications including aerospace, lighting, energy and medical electronics.

### Product Benefits

- The combination of high electrical conductivity, high shear strength, and high adhesion to a broad range of materials makes it a good choice for bonding in many flexible and stretchable applications
- Compatible with large die and applications with high CTE mismatch
- Accommodates bending and stretching along the bond line and improves interconnect robustness and reliability
- Outstanding thermal and electrical conductivity with a unique combination of high flexibility, high die shear strength after significant thermal cycling, and high adhesion to a broad range of materials
- Provides stress relief for bonding dissimilar materials which enables high reliability performance metrics such as high resistance to shock and cyclic fatigue
- Can be used to bond rigid components in packages with large thermally induced strains

### Typical Performance

Volume Resistivity <sup>1</sup> 140°C, 60 min, box oven	<2.0 x 10 <sup>-4</sup> Ω·cm
Thermal conductivity <sup>2</sup>	> 12 W/(m*K)
Die Shear <sup>3</sup> After 1800 cycles moving between -40°C & 150°C	> 50 kg-f
Tg	- 10 °C
Stretch	40%
Lap shear strength	> 1,500 kPa

### Typical Properties as Supplied

Physical State	Paste/Ink
Color	Silver
Viscosity <sup>4</sup>	27 Pa·s
Density	3.2 g/mL
Pot Life	12 - 14 hours
Shelf Life at -40°C <sup>5</sup>	12 Months
Weight Loss on Cure	<1%
Weight Loss on 300°C TGA	< 3%

### Processing

Deposition	Stencil / Syringe / Jet	
Recommended Curing Conditions	60 minutes	140 °C
	30 minutes	150 °C
Clean up	Acetne/MEK/Similar solvents	

<sup>1</sup> Measured 24 hours after suggested cure cycle

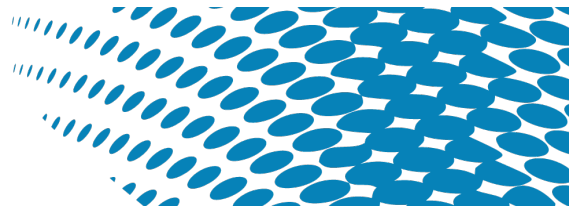
<sup>2</sup> ISO 22007-2:2015 @ 121°C

<sup>3</sup> Die size used in this test was 20mm x 8mm. No cracks or delamination occurred

<sup>4</sup> Measured on Anton Paar MCR302 Rheometer at 10<sup>-1</sup> sec shear rate at 25°C

<sup>5</sup> Storage at different temperatures can adversely affect properties





## Contact ACI

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## Caution

Proper industrial safety precautions should be exercised in using these products. Use with adequate ventilation. Avoid prolonged contact with skin or inhalation of any vapors emitted during use or heating of these compositions. The use of safety eye goggles, gloves or hand protection creams is recommended. Wash hands or skin thoroughly with soap and water after using these products. Do not eat or smoke in areas where these materials are used. Refer to appropriate SDS information.

## Disclaimer

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