

### ***Creative Materials Introduces Adhesives for Crystal Oscillator Circuits***

**June 2011, Tyngsboro, MA:** Creative Materials, Inc., manufactures electrically conductive and electrically insulating adhesives for quartz oscillator circuits. These products are low-stress adhesives and feature excellent thermal stability. Designed for a variety of applications, these adhesives are an excellent choice for bonding of leads onto quartz crystals and in surface mount lid attachment.



<b>Products</b>	<b>Properties</b>	<b>Features</b>
<b>120-02</b>	Electrically Conductive	Flexible, medium viscosity, screen-printable
<b>110-16</b>	Electrically Conductive	Flexible, low viscosity, syringe dispensable
<b>124-08A/B/C</b>	Electrically Conductive	High bond strength, excellent thermal cycling; available as one- or two-component product
<b>122-07</b>	Lid Attachment	Thermally conductive, B-stageable
<b>124-07</b>	Lid Attachment	Excellent thermal cycling, B-stageable
<b>108-50</b>	Lid Attachment	Low shrinkage, excellent thermal cycling
<b>109-12</b>	Lid Attachment	Extremely thermally conductive, low shrinkage, excellent thermal cycling

Crystal oscillators are used in an increasing variety of modern communications devices, as well as in many devices that are used to measure time. Among the common applications are cell phones, quartz watches, computers, radio transmitters and receivers, and sonar devices. The effective function depends on the oscillator striking a resonant frequency to create an electrical signal. Electrically conductive adhesives are used in the bonding of leads onto crystals. In this application, the best adhesives have small particle size, low shrinkage, and high bond strength. Low resin bleed is also an important characteristic, in order to ensure that the oscillation is not affected. Thermally conductive adhesives are used for lid attachment.

In recent years, adhesives are more highly customized as they become integral to the functional device. In the case of crystal oscillators, the characteristics of the adhesive can greatly affect the oscillating functioning. Creative Materials' adhesives combine features such as low thermal stress, ability to be screen printed and /or machine



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ISO 9001 CERTIFIED

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dispensed (also available as a die-stamping adhesive), excellent electrical conductivity and thermal stability, low out-gassing to ensure thermal stability, and low resin bleed.

Creative Materials, Inc., is a leading manufacturer of electrically conductive inks, coatings, and adhesives. Products from Creative Materials are used in electronic components for computers, keyboards, cell phones, solar collectors, automobiles and aircraft, for medical electrodes, medical instruments, and heating equipment. Creative Materials is ISO 9001 certified, with an extensive product line that includes more than 1,000 products. The company is renowned for creating custom formulations that are used in a wide variety of global applications, providing cost-effective design solutions for demanding production requirements. With over 80 years of experience in the adhesives, ink and coating industry, our staff combines technical expertise with nimble production capabilities, enabling us to reduce time-to-market for new product applications.

Our products are manufactured to order, with typical lead times of two or more weeks. Pricing is available upon request. For more information about these and other products, please visit our website at [www.creativematerials.com](http://www.creativematerials.com), or contact us at [info@creativematerials.com](mailto:info@creativematerials.com)