CREATIVEMATERIALS

www.creativematerials.com

ISO 9001 CERTIFIED

Creative Materials, Inc.
12 Willow Road
Ayer, MA 01432

T 978.391.4700
F 978.391.4705

111-29

ANISOTROPIC CONDUCTIVE THERMOPLASTIC ADHESIVE

DESCRIPTION: 111-29 is an anisotropic, conductive hot melt adhesive solution. This product features excellent adhesion to Kapton, Mylar, glass and a variety of other substrates. Unlike conventional conductive materials, this product is very resistant to flexing and creasing. The product can be rebonded many times by simply adding heat and slight pressure. Applications for 111-29 include, but are not limited to, conductive splicing of ribbon cables, PTF circuits, and electrical attachment of surface mounted devices. This product is useful in application where shorts between closely spaced contacts is a concern. 111-29 is a harder, high temperature resistant version of 111-05.

TYPICAL CURED PROPERTIES:

Property	Value
Volume Resistivity (Ω-cm)	
(X, Y Axis)	1×10^{12}
(Z Axis)	0.0001
Consistency	Smooth paste
Crease Resistance	Excellent
Hydrolytic Stability	Excellent
Useful Temperature Range (°C)	-55 to 140
Thermal Stability (°C)	Good to 220
Peel Strength (lbs./inch)	9 - 11

HANDLING & CURING: 111-29 is ready to use as supplied. Further thinning may be accomplished by adding small amounts of MEK. Apply thin film of adhesive to both surfaces to be bonded. Dry at room temperature for approximately 10 to 20 minutes. At this point, the surfaces should be pressed firmly together. Best properties, for most applications, result when cured for 5 to 10 minutes at 120°C. Good properties are obtained on a variety of substrates by curing at temperatures ranging from 50°C to 180°C. Alternately, the assembled part can be cured at room temperature, allowing 1 week to develop full strength. End user is advised to experimentally determine temperature and time best suited for individual applications. (See back of sheet for step-by-step directions.)

STORAGE: Shelf life: 2 months at 25°C; or 6 months at 5°C; or 9 months at -10°C.

SAFETY & HANDLING: Contains flammable solvents. Use with adequate ventilation. Keep away from sparks and open flames. Avoid prolonged contact with skin and breathing of vapors. Wash with soap and water to remove from skin.

All technical information is based on data obtained by CMI personnel and is believed to be reliable. No warranty is either expressed or implied with respect to suitability in a particular application or possible infringements on patents.

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PROCEDURE FOR APPLYING 111-29

1. As with all adhesive bonds, surface preparation is a vital part of the process. Carefully clean both surfaces to be bonded with MEK if possible. If MEK is not compatible with the surfaces to be bonded, another suitable solvent may be substituted.

2. Allow cleaned surfaces to dry for approximately 2-3 minutes.

3. Apply CMI#111-29 to both surfaces to be bonded by means of a suitable technique (i.e. syringe dispensing, brushing, spraying, etc.). The thickness range for good bonding is typically 0.6 mils to 1.3 mils for most surfaces, but is influenced by the geometry of the surfaces. The end user is encouraged to experimentally determine the best thickness for each individual application.

4. Allow CMI#111-29 to dry at room temperature until it is tack-free to the touch. (A slightly elevated temperature may be used if needed.) The time will vary depending on the thickness, but usually is approximately 5-10 minutes.

5. Place the two surfaces together and cure in a heat-sealing press for 2-5 seconds @ 140°C using enough pressure to hold the surfaces tightly together. Lower temperatures may be used but the cure times will be longer.

6. Allow to cool to room temperature under the same pressure.

7. Remove pressure. Part is ready for use.

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