CREATIVEMATERIALS

www.creativematerials.com

ISO 9001 CERTIFIED
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Creative Materials, Inc.
12 Willow Road
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102-32G1

FLEXIBLE HIGH TEMPERATURE ELECTRICALLY CONDUCTIVE ADHESIVE

DESCRIPTION: 102-32G1 is a flexible electrically conductive silicone adhesive. 102-32G1 features the highest degree of thermal and mechanical reliability over any other conductive adhesive technology and provides no failures during thermal cycling, heat aging, shocking or vibration due to the reliability from the elasticity of the product. Some applications for 102-32G1 include, but are not limited to, elastomeric conductive bridging and bonding, conductive bonding of low surface energy materials, conductive via filling and electrical attachments for stress sensitive devices. 102-32G1 is one of the few conductive adhesives that can bond to silicone substrates and surfaces. In addition, it can be bonded to some types of Teflon® surfaces. 102-32G1 features better conductivity than 102-32 when cured at lower temperatures.

TYPICAL CURED PROPERTIES:

Viscosity (#CP-51, 10/s, cps)	25,000 – 35,000
Thixotropic Index (1/10)	3
Filler	Silver
Percent Silver (cured)	> 84
Percent Solids	84 – 89
Crease Resistance	Excellent
Volume Resistance (Ω-cm, 80°C cure, MAX)	0.0001
Volume Resistance (Ω-cm, 140°C cure, MAX)	0.00008
Thermal Conductivity (W/m-K)	12.7
Solderable	After plating
Useful Temperature Range (°C)	-70 to +260
Thermal Stability (°C)	Good to +325

SUGGESTED HANDLING & CURING: 102-32G1 is ready to use as supplied. Further thinning may be accomplished by adding small amounts of toluene, xylene, or 127-05. Prior to using, be certain to resuspend silver. Apply thin film of adhesive to both surfaces to be bonded. For best mechanical properties heat for 5 to 10 minutes at 100°C and assemble while still warm. Apply slight pressure to assure good mating of surfaces and formation of filet. Best properties, for most applications, result when cured for 5 to 10 minutes at 160°C. See typical cured properties table for lower temperature cure profiles. Add 0.25 – 0.5% by weight B-507 catalyst when maximum strength and chemical resistance is needed. Good properties are obtained on a variety of substrates by curing at temperatures ranging from 25°C to 200°C. End user is advised to experimentally determine temperature and time best suited for individual applications.

STORAGE: Shelf life: 3 months at 25°C; or 6 months at -10°C; or 12 months at -40°C.
NOTE: Use catalyzed product within 24 - 36 hours.
***102-32G1 packaged in syringes must be kept frozen at -40°C or below.**

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.

REVISION DATE: 04/26/22 REVISION: B

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Guidelines for Handling of Syringes

STORAGE:

- Upon receipt of shipment, syringes should be unpacked immediately and stored in freezer at -10°C, -20°C, -40°C, or -80C per recommendations on TDS. If TDS does not have a recommendation, please contact info@creativematerials.com for specific recommendations.
- Do not handle syringes from the body of the packaging. Handle from the ends of the packaging.
- Store syringes vertically (upright) with tip side down. Do not store syringes horizontally (sideways). Syringes should be stored in this manner until needed for production. Shelf life of syringes will be indicated on the products technical data sheet.
- Syringes are labeled with product number, lot number, and manufacturing date. It is important that the syringes are used according to earliest manufacturing date, "FIFO" (first in, first out).

PREPARING SYRINGES FOR USE:

- To thaw syringes, remove them from the freezer taking care not to handle the body of the syringe (handle from the top and/or the tip) and allow them to acclimate to ambient temperature with the tip down.
- Do not use hands to warm syringe.
- The thawing time for each syringe will vary based on mass and composition but a minimum of 45 minutes for 3cc, 5cc, and 10cc and a minimum of 90 minutes for 30cc syringes should be observed.
- Using a heat source to thaw syringes is not advised.
- Proximity to a heat source during thawing should be greater than 3 feet.
- Although most materials can be refrozen minimizing freeze-thaw cycles is recommended.
- Once material is fully thawed remove protective wrapping.

SYRINGE INFORMATION:

- Creative Materials syringes have luer-lock fittings and are compatible with most types of dispensing equipment.
- Creative Materials syringes are provided packaged with smooth flow piston technology design for use on automated or manual dispense equipment but are not hand plunger equipped.
- Creative Materials routinely provides syringes in volumes of 3cc, 5cc, 10cc, and 30cc. Other sizes may be available upon request.
- Other information regarding syringes can be obtained by sending an email to info@creativematerials.com.

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