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

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# 102-32NFC

# FLEXIBLE HIGH TEMPERATURE ELECTRICALLY CONDUCTIVE ADHESIVE

**DESCRIPTION:** 102-32NFC is a flexible electrically conductive silicone adhesive. 102-32NFC 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 102-32NFC 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. 102-32NFC is one of the few conductive adhesives that can bond to silicone substrates and surfaces. 102-32NFC is a non-flammable version of 102-32.

#### **TYPICAL CURED PROPERTIES:**

Viscosity (cps)	30,000
Filler	Silver
Percent Silver (cured)	> 78
Volume Resistance (Ω-cm, MAX)	0.0001
Thermal Conductivity (W/m-K)	5.4
Crease Resistance	Excellent
Young's Modulus (MPa)	1,700
Tensile Strength (MPa)	> 5
Hardness (Shore A)	~55
Tear Strength (N/m)	12,500
Useful Temperature Range (°C)	-70 to +260
Thermal Stability (°C)	Good to +325

**<u>SUGGESTED HANDLING</u>**: Before using 102-32NFC should be stirred gently to ensure homogeneity. Further thinning may be accomplished by adding small amounts of toluene, xylene, or 127-05.

**SUGGESTED CURING AND BONDING:** Apply thin film of adhesive to both surfaces to be bonded. Good properties are achieved when cured for 60 minutes at 150°C but end user is advised to experimentally determine temperature and time best suited for individual applications. 102-32NFC is not recommended for applications that cannot cure above 100°C.

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**<u>STORAGE</u>**: Shelf life: up to 2 weeks at 25°C; or 6 months at 5°C; or 12 months at -20°C. **\*102-32NFC packaged in syringes must be kept frozen at -40°C or below.** 

**SAFETY & HANDLING**: 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.



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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.

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. REVISION DATE: 04/26/22 REVISION: B