

Bondline™ 7784 is a medium viscosity, one component, thermally conductive epoxy adhesive. It has excellent impact, thermal and moisture resistance. It is used as an encapsulating, substrate attach, heat sink attach, lid sealing and component staking adhesive. It exhibits strong adhesion to difficult-to-bond metals, such as gold, silver, and copper.

*“A Reliable  
and Responsive  
Adhesive  
Company.”*

### Adhesive Properties

|                                       |   |
|---------------------------------------|---|
| Color:                                | Off White   |
| Work Life @ 25°C:                     | 2 weeks   |
| Hardness (Shore D):                   | 90  |
| Cure Options:                         | 1 hour @ 125°C or<br>30 minutes @ 150°C                               |
| Service Temperature Range:            | -80°C to 150°C  |
| Lap Shear Strength @ 25°C (Al to Al): | 5000 psi  |
| Specific Gravity:                     | 1.8   |
| Thermal Conductivity:                 | 0.6 W/mK  |
| Volume Resistivity:                   | $6 \times 10^{14}$ ohm-cm   |
| Dielectric Strength:                  | 600 volts / mil   |
| Dielectric Constant:                  | 6.4 ( @ 1 KHz )   |
| Dissipation Factor:                   | .001 ( @ 1 KHz )  |
| Glass Transition Temperature (Tg)*:   | 130°C   |
| Coefficient of Thermal Expansion*:    |   |
| Below Tg:                             | $45 \times 10^{-6}$ in/in/°C  |
| Above Tg:                             | $179 \times 10^{-6}$ in/in/°C   |
| Weight Loss @ 85°C:                   | Nil   |
| @ 105°C:                              | Nil   |
| Shelf Life:                           | 6 months @ 5°C<br>1 year @ -40°C                                      |
| Availability:                         | Net volume 1cc to 5cc, available in<br>disposable 3cc & 5cc syringes. |

Adhesive properties are not intended to be used as specification limits.

\* Cured 1 hour @ 125°C

**Bondline™**

Electronic Adhesives, Inc.

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# ***General Instructions for Adhesive Storage and Use***

## **FROZEN STORAGE** – Unless otherwise stated

This adhesive must be stored at (minus) –40°C (°F) or colder at all times. Storing this adhesive at temperatures warmer than (minus) –40°C (°F) may alter the adhesives' properties and shorten its work life. DO NOT RE-FREEZE adhesive that has already been thawed!

## **THAWING PROCESS**

Adhesive must reach room temperature before use. Remove syringes from freezer. Place syringes on end for thawing. See chart below for thaw time based on syringe size.

| SYRINGE SIZE | THAW TIME  |
|--------------|------------|
| 1cc          | 5 minutes  |
| 3cc          | 10 minutes |
| 5cc          | 15 minutes |
| 10cc         | 20 minutes |

**\*\* NOTE:** To accelerate thaw time, place syringes in front of an air blower or fan. This will reduce the thaw time by approximately 50%. Remove all condensation from syringes prior to use.

## **SURFACE PREPARATION**

Make sure that all surface areas to be bonded are free of any contamination. If parts have been solvent cleaned make sure solvent is dried before applying adhesive

## **APPLICATION**

Check the work life of the adhesive, on the technical data sheet. Adhesives must be used within the work life time period. The adhesives' properties will change (usually thicken) if it is used past the allowable work life.

Apply adhesive using dispensing equipment of choice. Contact Bondline Technical Service with questions about dispensing adhesives.

## **CURE**

Choose a Cure Option (time & temperature) from the Bondline technical data sheet. Preheat the oven to the temperature of the selected cure option. For optimum cure, do not deviate from the selected cure option. Be sure to allow additional time for holding fixtures to reach cure temperature. Avoid opening oven doors during cure. Large fixtures and/or multiple fixtures may require extended cure time.

## **SAFETY**

Review the adhesive Material Safety Data Sheet (MSDS) before using. Refer to the MSDS in case of emergency. Always wear protective gloves and goggles while handling adhesives. Only work with adhesives in well-ventilated areas, with curing ovens vented outside. For industrial use only.

## **TECHNICAL SERVICE CONTACT**

For recommendations and help with any aspect of adhesive applications please contact the Bondline Technical Service Department (408) 830-9200, or via email: [info@bondline.net](mailto:info@bondline.net) or visit our website, [www.bondline.net](http://www.bondline.net)

**CAUTION:** For industrial use only. People with sensitive skin may have a reaction to this adhesive. Avoid skin contact. Wash all areas with soap and water immediately if contact does occur. It is important to refer to Material Safety Data Sheet (MSDS) OSHA for more details.

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