

## DA 158N Die Attach Product Datasheet

Outstanding Thermal Cycling Performance

Excellent Mechanical shock Performance

High Process Yield

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### **Description**

DA 158N is an electrical insulating and thermal conductive die attach adhesive. It can be cured at lower temperatures. This material is designed for extremely harsh die attach application. It is also suitable for bare chip protection in a variety of advanced packages such as memory cards, chip carriers, hybrid circuits and multi-chip modules. It is designed for high production and friendly environments where process speed and mechanical shock are the key concern. This material is easily dispensed, minimizes induced stresses and provides outstanding reliability performance (e.g. temperature cycling performance) and excellent mechanical resistance.

### **Typical Physical Properties**

|                                                                |                                   |
|----------------------------------------------------------------|-----------------------------------|
| <b>Product Name</b>                                            | DA 158N Die attach Adhesive       |
| PROPERTIES OF UNCURED MATERIAL                                 |                                   |
| Appearance                                                     | white                             |
| Specific Gravity (ASTM D 1475-60)                              | 1.08 g/cc                         |
| Viscosity (Brookfield, 0.5 rpm)                                | 5-8.0 kcp                         |
| PROPERTIES OF CURED MATERIAL                                   |                                   |
| Glass Transition Temperature (T <sub>g</sub> ) (ASTM D3418-82) | 138 °C                            |
| C.T. E (ASTM E 831), PPM /°C (ASTM E 831)                      | $\alpha_1 = 22$ ; $\alpha_2 = 71$ |

|                                           |        |
|-------------------------------------------|--------|
| Lap shear strength (psi)                  | 2600   |
| Thermal conductivity (W/mK)               | 2-3    |
| Extractable ions (MIL-STD-883E)           |        |
| Na+                                       | <5ppm  |
| K+                                        | <5ppm  |
| F-                                        | <5ppm  |
| Cl-                                       | <10ppm |
| Surface insulation resistance (J-STD-004) | Pass   |

## **Recommended Curing Conditions**

40-60 min at 150°C

Other alternative cure profiles are available depending on customer request.

## **Storage & Shelf Life**

6 months provided materials are kept in a sealed original container at –40 °C. Storage beyond this period can produce higher viscosity. Protect from moisture, evaporation and foreign materials. Process ability of these products can be adversely affected by evaporation and contamination.

## **Safety**

DA 158N is a friendly, non-toxic material. However, general hygiene practice is recommended when handling this material. For detailed information, please consult the product SDS.

## **Package**

DA 158N capillary encapsulate series are available in 10 cc and 30cc packages. Other packages are available depending upon customer's request. Contact YINCAE for order information.