

# 50-3186NC

## VERY HIGH TEMPERATURE RESISTANT EPOXY ADHESIVE

### DESCRIPTION:

50-3186NC is a two-part thermally conductive epoxy adhesive. This thixotropic adhesive provides high temperature bonds to a variety of substrates. 50-3186NC is a perfect choice for applications requiring high thermal conductivity, low thermal expansion, and high operating temperature performance.

### TYPICAL SPECIFICATIONS:

|                                      |                       |
|--------------------------------------|-----------------------|
| Viscosity, cps, 25 °C                |                       |
| 50-3186RNC Resin                     | Paste                 |
| Cat.45CL                             | 25,000                |
| Cat.185TB                            | 230                   |
| Cat.190CL                            | 60                    |
| Mixed                                | Paste                 |
| Mix Ratio, (Resin:Catalyst)          |                       |
| Cat.45CL                             | 100:7.5               |
| Cat.185TB                            | 100:(17-21)           |
| Cat.190CL                            | 100:(3-4)             |
| Available Colors                     | Black, Blue           |
| Hardness, Shore D                    | 90                    |
| Operating Temperature Range, °C      | -40 to +230           |
| Specific Gravity, 25 °C              |                       |
| 50-3186RNC Resin                     | 2.4                   |
| Cat.45CL                             | 1.01                  |
| Cat.185TB                            | 1.24                  |
| Cat.190CL                            | 0.99                  |
| Tensile Strength, psi, 25°C          | 2,700                 |
| Flexural Strength, psi               | 17,250                |
| Volume Resistivity, 25 °C, ohm-cm    | 10 <sup>15</sup>      |
| Coefficient of Thermal Expansion, °C | 28 x 10 <sup>-6</sup> |
| Thermal Conductivity, W/m·K          | 1.38                  |

## INSTRUCTIONS FOR USE:

Note: Mix 50-3186RNC resin thoroughly to re-disperse fillers. Some settling during transit or storage is common. Warming resin to 40C prior to mixing will improve air release and lower viscosity.

### Catalyst 190:

1. By weight, thoroughly mix 100 parts 50-3186RNC resin to 3-4 parts Catalyst 190.
2. Degas, pour, and cure according to one of the following recommended cure schedules:

|          |          |
|----------|----------|
| a) 25 °C | 24 Hours |
| b) 65 °C | 2 Hours  |

### Catalyst 185:

1. By weight, thoroughly mix 100 parts 50-3186RNC resin to 17-21 parts Catalyst 185.
2. Degas, pour, and cure according to one of the following recommended cure schedules:

|           |         |
|-----------|---------|
| a) 120 °C | 8 Hours |
| b) 150 °C | 6 Hours |
| c) 175 °C | 3 Hours |
| d) 205 °C | 2 Hours |

### Catalyst 45:

1. By weight, thoroughly mix 100 parts 50-3186RNC resin to 7.5 parts Catalyst 45.
2. Degas, pour, and cure according to one of the following recommended cure schedules:

|          |            |
|----------|------------|
| a) 25°C  | 8 Hours    |
| b) 65°C  | 45 Minutes |
| c) 120°C | 20 Minutes |

## STORAGE, HANDLING, & SAFETY:

Store both components at 25 °C in original containers. The expected shelf life is 12 months in original containers.

Please read the Safety Data Sheet before using this or any other chemical.

## AVAILABILITY:

This product is available in quarts and gallons in black (50-3186RNCBK) and blue (50-3186RNCBL).

## IMPORTANT:

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