

LOCTITE 3508NH

November 2016

PRODUCT DESCRIPTION

LOCTITE 3508NH provides the following product characteristics:

Technology	Epoxy
Appearance	Black
Cure	Reflow
Product Benefits	• One component • Reflow curable • Eliminates post-reflow dispenses and cure steps • Reworkable • Halogen free • Improves mechanical reliability of hand-held devices
Application	Underfill
Typical Applications	Reworkable CSP/BGA cornerfill

LOCTITE 3508NH is designed to cure during Pb-free solder reflow while allowing self-alignment of IC components. It can be pre-applied to the board at the corners of the pad site using a standard SMA dispenser.

TYPICAL PROPERTIES OF UNCURED MATERIAL

Viscosity, Cone & Plate, @ 25 °C mPa·s (cP)	70,000
Specific Gravity	1.23
Shelf Life @ 2 to 8°C, months	6

Flash Point - See SDS

TYPICAL CURING PERFORMANCE

Cure Schedule

Pb-free solder reflow profile @ 245°C

With all curing systems, the time required for cure depends on the rate of heating. Conditions where a hot plate or a heat sink is used are optimum for fastest cure. Cure rates depend on the mass of material to be heated and intimate contact with the heat source. Use suggested cure conditions as general guidelines. Other cure conditions may yield satisfactory results.

The above cure profile is a guideline recommendation. Cure conditions (time and temperature) may vary based on customers' experience and their application requirements, as well as customer curing equipment, oven loading and actual oven temperatures.

TYPICAL PROPERTIES OF CURED MATERIAL

Physical Properties :

(Cured 3 hours @ 180°C)

Coefficient of Thermal Expansion, :

Below Tg, ppm/°C	65
Above Tg, ppm/°C	175

Glass Transition Temperature (Tg) by TMA, °C 118

Storage Modulus, 25°C, GPa 2.33

GENERAL INFORMATION

For safe handling information on this product, consult the Safety Data Sheet, (SDS).

STORAGE:

Store product in the unopened container in a dry location. Storage information may be indicated on the product container labeling.

Optimal Storage: 2 to 8°C. Storage greater than or below 2 to 8°C can adversely affect product properties.

Material removed from containers may be contaminated during use. Do not return product to the original container. Henkel Corporation cannot assume responsibility for product which has been contaminated or stored under conditions other than those previously indicated. If additional information is required, please contact your local Technical Service Center or Customer Service Representative.

Conversions

$(^{\circ}\text{C} \times 1.8) + 32 = ^{\circ}\text{F}$
 $\text{kV/mm} \times 25.4 = \text{V/mil}$
 $\text{mm} / 25.4 = \text{inches}$
 $\text{N} \times 0.225 = \text{lb}$
 $\text{N/mm} \times 5.71 = \text{lb/in}$
 $\text{psi} \times 145 = \text{N/mm}^2$
 $\text{MPa} = \text{N/mm}^2$
 $\text{N}\cdot\text{m} \times 8.851 = \text{lb}\cdot\text{in}$
 $\text{N}\cdot\text{m} \times 0.738 = \text{lb}\cdot\text{ft}$
 $\text{N}\cdot\text{mm} \times 0.142 = \text{oz}\cdot\text{in}$
 $\text{mPa}\cdot\text{s} = \text{cP}$

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