Hysol

3508NH

November 2011

PRODUCT DESCRIPTION

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

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 MSDS

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 @ 180ºC)

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 Material Safety Data Sheet, (MSDS).

DIRECTIONS FOR USE

1. Allow material to reach room temperature prior to opening the container and before use
2. After removing from freezer, set the syringes to stand vertically while thawing.
3. Syringes should thaw for a minimum of 60 minutes.

Not for product specifications

The technical data contained herein are intended as reference only. Please contact your local quality department for assistance and recommendations on specifications for this product.

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

(°C x 1.8) + 32 = °F
kV/mm x 25.4 = V/mil
mm / 25.4 = inches
N x 0.225 = lb
N/mm x 5.71 = lb/in
N/mm² x 145 = psi
MPa x 145 = psi
N·m x 8.851 = lb·in
N·m x 0.738 = lb·ft
N·mm x 0.142 = oz·in
mPa·s = cP

Henkel

Note

The data contained herein are furnished for information only and are believed to be reliable. We cannot assume responsibility for the results obtained by others over whose methods we have no control. It is the user's responsibility to determine suitability for the user's purpose of any production methods mentioned herein and to adopt such precautions as may be advisable for the protection of property and of persons against any hazards that may be involved in the handling and use thereof. In light of the foregoing, **Henkel Corporation and its affiliates ("Henkel") specifically disclaims all warranties expressed or implied, including warranties of merchantability or fitness for a particular purpose, arising from sale or use of Henkel products. Henkel specifically disclaims any liability for consequential or incidental damages of any kind, including lost profits.** The discussion herein of various processes or compositions is not to be interpreted as representation that they are free from domination of patents owned by others or as a license under any Henkel patents that may cover such processes or compositions. We recommend that each prospective user test his proposed application before repetitive use, using this data as a guide. This product may be covered by one or more United States or foreign patents or patent applications.

Trademark usage

All trademarks in this document are trademarks and/or registered trademarks of Henkel in the US and elsewhere.

Reference 0.2