



3536™

October 2009

PRODUCT DESCRIPTION

3536™ provides the following product characteristics:

Technology	Epoxy
Appearance	Black
Components	One component
Product Benefits	<ul style="list-style-type: none"> • Reworkable • Cures rapidly at low temperatures • Minimizes thermal stress • Rapid device throughput • Excellent protection for solder joints against mechanical stress
Cure	Heat Cure
Application	Underfill
Typical Assembly Applications	Chip scale packages and BGA

3536™ epoxy reworkable underfill is designed to provide protection for solder joints against mechanical stress such as shock, drop and vibration.

TYPICAL PROPERTIES OF UNCURED MATERIAL

Viscosity, Brookfield, 25 °C, mPa·s (cP): CP52/20	1,800
Pot Life @ 25°C, days	>14
Shelf Life @ 2 to 8°C, months	6
Flash Point - See MSDS	

TYPICAL CURING PERFORMANCE

Recommended Cure Schedule

- 5 minutes @ 120°C
- 2 minutes @ 130°C
- Curing above 140°C is not recommended.

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

Cured for 60 minutes @ 120°C,

Physical Properties

Coefficient of Thermal Expansion, ppm/°C:	
Below Tg	63
Above Tg	178
Glass Transition Temperature (Tg) by TMA, °C	53
Storage Modulus, GPa	3.5

GENERAL INFORMATION

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

This product is not recommended for use in pure oxygen and/or oxygen rich systems and should not be selected as a sealant for chlorine or other strong oxidizing materials.

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.

DIRECTIONS FOR USE

1. For best results, substrate should be preheated (up to 70 °C) to allow fast capillary flow.

Removal Procedure

1. Heat the underfill approximately 240°C using a hot air nozzle on standard BGA rework equipment.
2. Component can be twisted and removed.
3. Clean and remove residue using a tacky flux or liquid flux and a solder removal vacuum tool.

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 below 2°C or greater than 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/mm ² 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

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 specifically disclaims all warranties expressed or implied, including warranties of merchantability or fitness for a particular purpose, arising from sale or use of Henkel Corporation's products. Henkel Corporation 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 Corporation 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.

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