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LOCTITE

Technical Data Sheet

LOCTITE 3536

April 2018

PRODUCT DESCRIPTION

LOCTITE 3536 provides the following product characteristics:

Technology	Epoxy
Appearance	Black
Components	One-component
Product Benefits	• Reworkable • Cures rapidly at low temperatures • Minimizes thermal stress • Rapid device throughput • Excellent protection for solder joints agains mechanical stress
Cure	Heat Cure
Application	Underfill
Typical Assembly Applications	Chip scale packages and BGA

LOCTITE 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 - HBT, CP51, 25 °C, mPa·s (cP):	
Speed 50 rpm	1,800
Pot Life @ 25ºC, days	>14
Shelf Life @ 2 to 8°C, days	365
Flash Point - See SDS	

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 @ 120ºC,

Physical Properties

Coefficient of Thermal Expansion, ppm/°C:		
Below Tg		63
Above Tg		178
Glass Transition Temperature (Tg) by TMA, °C		53
Storage Modulus	N/mm² (psi)	3,500 (508,000)

GENERAL INFORMATION

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

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 240ºC 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.

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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
psi x 145 = N/mm²
MPa = N/mm²
N·m x 8.851 = lb·in
N·m x 0.738 = lb·ft
N·mm x 0.142 = oz·in
mPa·s = cP

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