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Technical Data Sheet

LOCTITE® 3629C

July 2024

PRODUCT DESCRIPTION

LOCTITE® 3629C provides the following product characteristics:

Technology	Epoxy
Appearance	Red
Product benefits	• Halogen free • One component • Fast cure • High thermal mechanical strength
Cure	Heat cure
Application	Surface mount adhesive

LOCTITE® 3629C epoxy is formulated for bonding surface mounted devices to printed circuit boards prior to wave soldering. It is designed provide controlled dot size and shape, making it particularly suitable for high speed dispensing.

TYPICAL PROPERTIES OF UNCURED MATERIAL

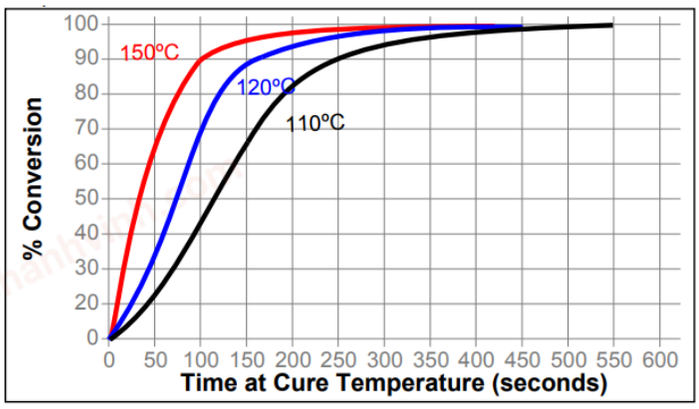
Yield point, @ 25°C, Pa·s	
Haake PK 100, M10/PK1 2° Cone Casson model over 0.4-30 s^{-1}	165
Specific gravity	1.38
Flash point - see SDS	
Pot life @ 25°C, days	7

TYPICAL CURING PERFORMANCE

Recommended curing condition is exposure to heat above 100°C, (minimum 150 seconds @ 120°C or 90 seconds @ 150°C at the bondline). Rate of cure and final strength will depend on PCB type and population, ramp up temperature, stability of the component temperature and residence time at temperature.

Cure speed vs. temperature

The following graph shows the conversion rate with time and temperature.



TYPICAL PROPERTIES OF CURED MATERIAL

Physical properties

Coefficient of thermal expansion, ISO 11359-1, ppm/°C	
Below Tg	45
Above Tg	144
Glass transition temperature, (Tg) by TMA, °C:	
Sample cured 30 min @ 150°C	≥118
Density @ 25ºC, g/cm³	1.4
DSC, °C	
Onset	82
Peak	120

General information

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

Thawing

1. Allow container to reach room temperature before use, normally 2 to 4 hours.

Directions for use

1. Avoid cross-contamination with other adhesive residues by ensuring dispense nozzles, adaptors, etc. are thoroughly cleaned.
2. Do not leave dirty nozzles on dispensing equipment while not in use or soaking in solvents for long periods of time.
3. The quantity of adhesive dispensed will depend on the dispense pressure, time, nozzle size and temperature.
4. These parameters will vary depending on the type of dispensing system used and should be optimised accordingly. The following are the recommended parameters for your reference:

Dispense machine	Panasonic HDF
Nozzle size, mm	0.33
Nozzle temp, ºC	35
Nozzle stroke, mm	13.5
Air pressure, MPa	0.06

5. Dispensing temperature should ideally be controlled at a value between 30 to 35°C for optimum results, however higher dispense temperatures are possible.
6. Under normal work environment of 25°C and 55% RH, the product will remain dispensable for a maximum of 2 days of continuous operation. Higher temperatures or humidities will reduce the product's "on machine" life.
7. Uncured adhesive can be cleaned from the board with Isopropanol, MEK or ester blends such as LOCTITE® 7360.

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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 8ºC. Storage below 2°C or above 8°C can adversely affect product properties.

Material removed from the package may be contaminated during use. Do not return product to the original package. 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.

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 the specifications of this product.

Conversions
(°C x 1.8) + 32 = °F
kV/mm x 25.4 = V/mil
mm / 25.4 = inches
µm / 25.4 = mil
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

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