

Thermoset Chip Glue (Red) – 200g cartridge

Product Highlights

Lead-Free, RoHS 3 Compliant, REACH Compliant

Heat curing epoxy adhesive designed to bond surface mount chips and ICs to printed circuit boards (PCBs). Higher Viscosity for Stencil Printing. Designed to be printed with stencil and squeegee.

Allows large/heavy surface mount components to be permanently bonded to a PCB during reflow, allowing two-sided surface mount reflow without larger chips/ICs coming loose.



Specifications

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| Curing Time: | 90 to 120 seconds at 150+ °C (302+ °F) |
| Recommended Curing Temperature: | 150 to 260 °C (302 to 500 °F) |
| Maximum Curing Temperature: | 260 °C (500 °F) |
| | Designed to cure at leaded and lead free reflow temperatures. |
| Operating Temperature Range: | -40 to 125 °C (-40 to 257 °F) (After Curing, After Reflow) |
| Lap Shear Strength (After Curing): | >15MPa (Steel-Steel, 25 °C (77 °F)) |
| Density: | 1.25g/cc |
| Viscosity (Malcom @ 5 RPM, 25°C): | 450,000 mPa-s |
| Glass Transition Temperature (Tg): | 80°C |
| Coefficient of Thermal Expansion (CTE) below Tg: | 60x10 ⁻⁶ /K (60 ppm/°C) |
| Coefficient of Thermal Expansion (CTE) above Tg: | 120x10 ⁻⁶ /K (120 ppm/°C) |
| Thermal Conductivity: | 0.14 W/(m·K) |
| Dielectric Strength: | 25 KV/mm (at 25°C) |
| Dielectric Constant: | 3.2 (at 25°C, 1MHz) |
| Dielectric Loss Angle Tangent: | <0.02 (at 25°C, 1MHz) |
| Adhesive Spot Diameter Growth During Curing: | <10% |
| Packaging: | 200g cartridge |
| Shelf Life: | Refrigerated >12 months, Unrefrigerated >12 months |

Stencil Life

>8 hours @ 20-50% RH 22-28°C (72-82°F), >4 hours @ 50-70% RH 22-28°C (72-82°F)

Application

Apply by dot dispensing, line dispensing, or with stencil and squeegee.

Cleaning

Clean using isopropyl alcohol (IPA).

Storage and Handling

Store at 3-25°C (37-77°F). Do not freeze. Allow 4 hours for thermoset chip glue to reach an operating temperature of 20-25°C (68-77°F) before use.

Transportation

This product has no shipping restrictions. Shipping below 0°C (32°F) or above 25°C (77°F) for normal transit times by ground or air will not impact this product's stated shelf life.

Chip Quik AD1 Red Glue Usage Instructions

Chip Quik AD1 Red Glue only works as an adhesive after it has been applied between a part and the PCB, then baked in a reflow oven (which cures the AD1 Red Glue), and then cooled. Before it has been heated (cured), it is slightly sticky, but will not hold parts in place. Once baked and cooled, upon additional reflow cycles, the cured AD1 Red Glue will stay hardened and will help hold heavier parts in place while the solder alloy joints melt and then re-solidify during secondary reflow.

How to Apply and Cure Chip Quik AD1 Red Glue

- First apply solder paste to the top side of your PCB.
- Then apply AD1 Red Glue to the top side under where any heavy parts will be placed.
- Place the top side parts on the PCB.
- Reflow the PCB. Standard leaded and lead-free solder paste reflow cycles will normally be hot enough to fully cure the AD1 Red Glue as well, which requires at least 90-120 seconds at 150-260 Celsius to cure.
- Flip the PCB over.
- Apply solder paste to the bottom side.
- You can also apply AD1 Red Glue to the bottom side under any heavy bottom side parts, if you are ever planning to reflow the PCB for a third reflow cycle, or if you want the added strength of the AD1 Red Glue also holding the bottom side parts on.
- Place the bottom side parts on the PCB.
- Reflow the PCB.

Alternatively, you can switch the order to bottom side first, then top side. Usually, you want to first reflow the side with the lightest components, and reflow the heaviest part side second.