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## HLT1000P APPLICATION NOTE

**Honeywell**

## Overview

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## Product Introduction: HLT1000P

- Honeywell Silicone Potting Material– HLT1000P is two-part room temperature curing potting material made of silicone and thermally conductive filler with low viscosity & low specific gravity, meeting UL94 V-0 flammability rating and self-leveling for pouring over/injection over applications.
- This product is easy to mix and pour or inject, making it ideal for high volume manufacture. It can be cured after two-component mixing and can be cured faster under higher temperature. It can prevent the PCB and electronic components from environmental corrosion, dust and moisture and mechanical damage and help reduce shock and vibration. It can keep robust performance in heat dissipation, mechanic and electrically insulation under extremely conditions of temperature, humidity.
- Features and Benefits
  - Low viscosity enables ease of component encapsulation
  - Self-leveling avoids void-free encapsulation
  - Low specific gravity
  - Low stress brings low shrinkage and stress on components when curing

# Technical Specifications: HLT1000P

## • Technical Specifications

Uncured Typical Properties		
Chemical constitution		Poly-siloxane
Color	A	Dark Grey Liquid
	B	White Liquid
	Mixture	Grey Liquid
Viscosity@ 25°C	A	3600cps
	B	3200cps
	Mixture	3500cps
Density	Mixture	1.5g/cm <sup>3</sup>
Cured Typical Properties		
Thermally Conductivity		1.0 W/mK
Volume Resistivity		1×10 <sup>15</sup> ohm.cm
Dielectric Strength		> 15 kV/mm
Dissipation Factor@25°C		0.01
Hardness(shore00)		50

Mix Ratio (by weight or volume )	A:B=1:1
Applying	Automatic meter/mix/dispense equipment with plastic container
Operation Time	60min working time after A&B part mixed and vacuum
Cure Time	8hours@25°C 30min@80°C
Package	A: 10kg/ plastic drum B: 10kg/ plastic drum
Storage Condition	12months@Room Temperature

# Handling Method & Storage Condition

- **Storage conditions**
  - 12 months shelf life at 0- 35 °C / < 65% RH Storage
- **Store in a cool and dry ambient environment.**
- **Do not handle, store or open the container near open flame and/or source of heat or sources of ignition.**
- **Keep tightly closed except when using.**

## Application Notes

- There might be some particle settlement after long-term storage. HLT1000P A and B parts should be pre-mixed separately within its plastic drum to ensure particle disperse homogenously.
- Clean the surface of PCB and electronic components before applying HLT1000P
- Mix the A and B at the weight or volume ratio of 1:1, and remove bubbles through vacuum, then pour or inject the mixture into electronic components **with working time(60mins)**, then leave material to cure at 25°C for 8 hours or expedite the curing at 80°C for 30min.
- Keep the mixing always at the same direction to avoid bringing bubble into the mixture, and ensure A&B part dispensed homogenously to avoid non-cure or partial cure in some area; High speed mixing might produce extra heat during mixing, which will shorten the operation time
- Degas the whole component again for at least 1hr after encapsulation to remove the potential bubbles.
- The curing time will increase when temperature is lower than 25C.

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