



## CC3-341

### Thermally Conductive, Thin Glue Line Adhesive

CC3-341 was developed as a thin glue line adhesive to be used in bonding high wattage semiconductor mounting blocks to heatsinks. Being thermally conductive and electrically insulating, CC3-341 exhibits the unique capability of providing an excellent heat path between a power device and heatsink while insuring maximum electrical isolation. Glue lines as thin as .001" can be easily achieved while still maintaining a strong bond over a wide temperature range of -65° C to 155° C. When cured, CC3-341 is not adversely affected by moisture, humidity or salt spray, and will withstand repeated cycling through a wave solder machine.

#### ELECTRICAL AND PHYSICAL PROPERTIES:

Specific Gravity at 25° C: (uncatalyzed)	1.74
(catalyzed)	1.70
Viscosity cps at 22 ½° C: (uncatalyzed) 4-10-200	9,500
(catalyzed) 4-20-200	4,100
Standard Color	Black
Shelf Life	12 months
Tensile Strength @ 25° C, psi	8,298
Tensile Elongation: % @ yield	1.7 to 1.9
Compressive Strength @ 25° C, psi	23,400
Izod Impact: ft lbs/in of notch	0.25
Heat Distortion: °C	145
Water Absorption: %, 10 days @ 25° C	0.2
Linear Shrinkage: in/in	0.0025
Service Temperature, °C continuous	-65 to +125
Service Temperature, °C intermittent	-100 to +160
Hardness: Shore D	84 to 88
Bond Shear Strength: Al to Al 1" overlap: psi @ 25° C,	3,840
Thermal Conductivity: W/mK	1.1
Thermal Resistance: °C in/watt	35.6
Coefficient of Thermal Expansion: in/in/°C x 10 <sup>-6</sup>	26
Volume Resistivity @ 25° C, ohm-cm	10 <sup>16</sup>
Dielectric Constant @ 25° C, 100 KC	5.7
Dissipation Factor @ 25° C, 100 KC	0.02
Dielectric Strength: volts/mil	300 - 350

( Typical properties when cured with H-1 Hardener )



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### CHOICE OF HARDENERS:

- H-1 Hardener: Rigid, good dimensional stability, fast cure.
- H-18 Hardener: Resilient, excellent mechanical and thermal shock, low viscosity, good air release, fast cure.
- H-10LV Hardener: Variable hardness, excellent impact properties, long pot life

HARDENER	PARTS BY WEIGHT PER 100 PARTS OF RESIN	POT LIFE 100 GRAM 25°C (77°F)	CURE TIME 25° C (77°F)	CURE TIME 65° C (149° F)	CURE TIME 125° C (257° F)
H-1 Hardener	6.4	2 hrs.	24 hrs.	2 hrs.	---
H-18 Hardener	13.3	3 hrs.	24 hrs.	2 hrs.	---
H-10LV Hardener	rigid 15	3 hrs.	24 hrs.	3 hrs.	---
H-10LV Hardener	semi-flex 40	3 hrs.	24 hrs.	3 hrs.	---
H-10LV Hardener	flexible 62	3 hrs.	24 hrs.	3 hrs.	---

### ROOM TEMPERATURE CURE:

- H-1 Hardener: Cures overnight at room temperature or 2 hrs at 65° C.  
Do not heat cure if the mass exceeds 200 grams.
- H-18 Hardener: Cures overnight at room temperature or 2 hrs at 65° C.
- H-10LV Hardener: Cures overnight at room temperature or 3 hrs at 65° C.

### MIXING INSTRUCTIONS:

Mix CC3-341 thoroughly in it's shipping container to insure a uniform consistency. Weigh out the desired amount of resin in a clean container. Add the hardener accurately by weight in the proper proportion as specified above. (ie. 6.4 grams of H-1 Hardener and 100 grams of CC3-341 for a total mix of 106.4 grams) Mix thoroughly. Evacuate the mix in order to insure a void free glue line. Apply to both mating surfaces. Work the surfaces together, squeezing out the excess adhesive in order to obtain a thin bond line. The parts should be held securely in place with moderate pressure to prevent movement during cure.

\* The data herein is offered as a guide and does not constitute a specification. Cast Coat, Inc. makes no warranty express or implied as to the accuracy or completeness. Each user should evaluate the material to determine its suitability for his/her particular purpose. User assumes all risk and liability resulting from its use.