CREATIVEMATERIALS

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ISO 9001 CERTIFIED

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118-06 (SD)

ELECTRICALLY CONDUCTIVE, EPOXY DIE ATTACH ADHESIVE

DESCRIPTION

118-06(SD) is a syringe dispensable, B-Stageable, electrically conductive, one part epoxy coating and adhesive. 118-06(SD) can also be applied by dipping, it may require further thinning. This system features excellent thermal stability, outstanding chemical resistance and excellent high temperature properties. Applications include, but are not limited to assembling electrical and electronic components.

UNIQUE FEATURES

- Excellent Electrical Conductivity
- B-Stageable
- Excellent Chemical Resistance
- Outstanding Dispensability
- Excellent High Temperature Performance
- Low Ionics

IONIC CONTENT

Chloride	<10ppm
Sodium	<10ppm
Potassium	<10ppm

(Typical properties are not intended to be used as specification limits)

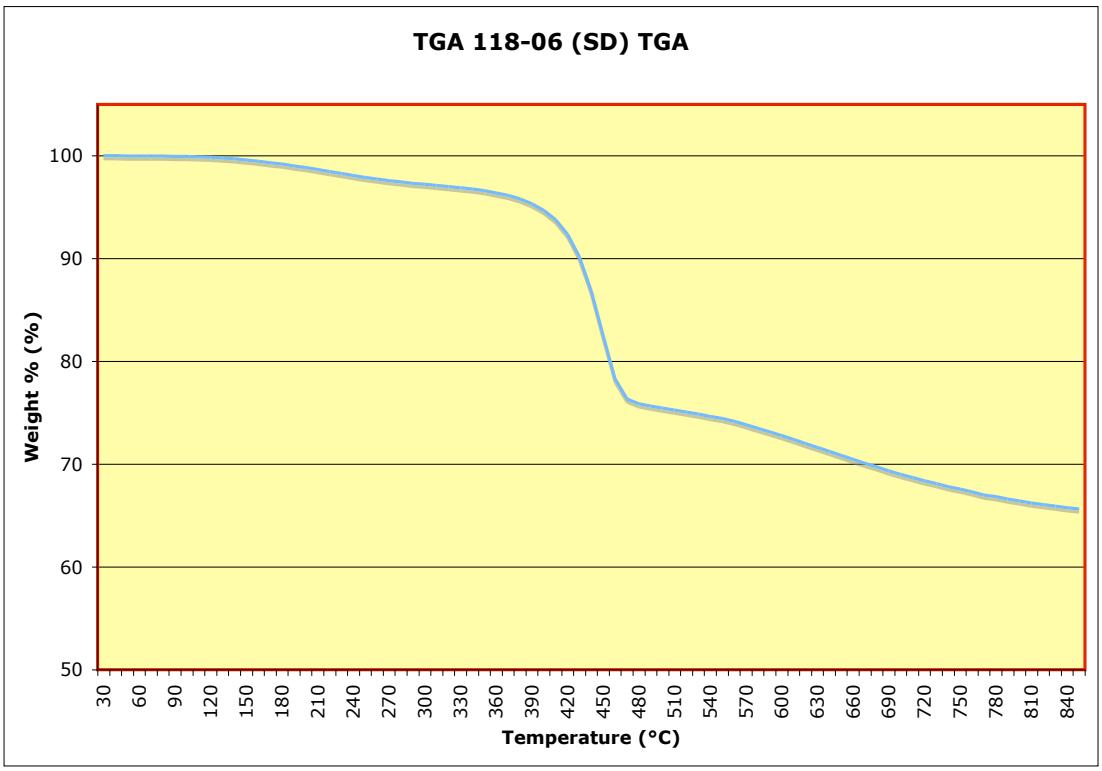
TYPICAL UNCURED PROPERTIES

Property	Value	Units
Viscosity – Brookfield HAT Viscometer @ 10 rpm @ 25ºC	85,000	cps
Specific Gravity	2.49	water = 1
Filler	Silver	N/A
Percent Silver (cured)	>74	%
Theoretical Coverage @ 0.001" Wet Thickness	20	in^2/gram
Solids	90	%
Color	Silver	N/A

TYPICAL CURED PROPERTIES

Property	Value	Units
Operating Temperature	-55 to +230	°C
Peak Temperature	325	°C
Volume Resistivity	0.0002	Ω - cm
Glass transition Temperature – Tg	100	ºC
Coefficient of Thermal Expansion	50	ppm/ºC
T-Shear Strength	2100	Psi
Weight Loss @ 300ºC, TGA	2.77	%
Differential Scanning Calorimetry (DSC) Peak Tc	168	ºC
Δ Hc	-33.4	J/g

TYPICAL CURED PROPERTIES – cont.



CURING GUIDELINES

Temperature (ºC)	Time (min.)
150	60
175	30
200	15

These temperatures and times are presented as a guide only. The end-user is encouraged to experiment to determine optimum curing schedule.

HANDLING AND STORAGE

118-06(SD) is a one component epoxy system and is ready to use as received. Product should be stored frozen to maintain consistent flow properties. **Allow 118-06(SD) to warm up to room temperature before opening container.** Prior to using, mix thoroughly to re-suspend fillers. If needed, 118-06(SD) can be thinned with small amounts of Creative Materials' 102-03 thinner.

SHELF LIFE

Storage Temperature	Containers	Syringes	B-Staged Film
25º C	2 months	N/A	1 month
-10º C	6 months	6 months	3 months

All technical information is based on data obtained by CMI personnel and is believed to be reliable. No warranty is either expressed or implied with respect to results or possible infringements on patents.

B-STAGE PROCEDURE

Apply adhesive to substrate. Apply heat to advance curing to the non-tacky stage (when cooled to room temperature). A temperature of 125º C for 2 – 3 minutes is required (B-stage time is mass related). The user is encouraged to experiment for optimum drying time at a given temperature. Store on release liner to prevent contamination.

BONDING PROCEDURE

To use, carefully align parts to be bonded, apply uniform pressure to maintain location. Follow curing guidelines given above. Timing should start once adhesive and substrate reach curing temperature.

Details

1. As with all adhesive bonds, surface preparation is a vital part of the process. Carefully clean both surfaces to be bonded with MEK if possible. If MEK is not compatible with the surfaces to be bonded, another suitable solvent may be used.

2. Allow cleaned surfaces to dry completely.

3. Die cut 118-06(SD) to the of the size of interface area, remove one of the protective liners, position onto one of the surfaces to be bonded, and warm the substrate/adhesive to 50°C-70°C.

4. By applying slight pressure, laminate the film/adhesive to the substrate smoothing out any trapped air. Allow to cool to room temperature and peel off the other release liner.

5. Position the other substrate and apply a clamp to provide constant pressure.

6. Cure per previous guidelines.

7. Remove pressure. Part is ready for use.

HEALTH AND SAFETY

Use with adequate ventilation. Keep away from sparks and open flames. Avoid prolonged contact with skin and breathing of vapors. Wash with soap and water to remove from skin.

REVISION DATE: 5/22/07 REVISION: B