



Enhanced PCB Protection

Features and Benefits

- Clear, thin, flexible, and durable
- Protects against dust, humidity, salt spray, corrosion, and chemical fogs
- Protects against electrical arcing, shorts, static discharges, and thermal shocks
- Contains a UV indicator for optical inspection
- Applied by brushing, dipping, manual and selective spraying
- Available in liquid, aerosol, and pen
- IPC and UL certified versions

Applications

- Improves reliability, and lengthens the life of electronic circuitry
- Protects circuitry in coastal, tropical, marine, and other humid environments
- Allows electronic devices to operate in harsh environments
- Allows traces to be placed closer together by preventing arcing

Acrylic - One-part conformal coating which is cost-effective, and easily reworkable.

419D – Certified to IPC-CC-830B and UL94 V-0

419E – Certified to IPC-CC-830C and UL746E

Silicone-modified Acrylic - One-part conformal coating that is both soft and flexible, and provides a wide service temperature range.

422C – Certified to UL94 V-0

Polyurethane - One-part conformal coating that provides strong protection against solvents, and corrosive gases.

4223F – Certified to IPC-CC-830B and UL746E

Epoxy - Two-part conformal coating that is flexible, and provides strong protection against chemicals.

4225 – Certified to IPC-CC-830C

UV Curable - One-part UV curable conformal coating suitable for high-throughput applications.

4200UV – Certified to IPC-CC-830C and UL746E

Conformal Coatings



	419D	419E	422C	4223F	4225	4200UV
BINDER SYSTEM	Acrylic	Acrylic	Silicone-modified Acrylic	Polyurethane	Epoxy	Urethane Acrylate
UNCURED PROPERTIES						
Solids %	30	29	30	45	41	96
Viscosity @ 25 °C [77 °F]	115 cP	160 cP	14 cP	290 cP	20 cP	160 cP
Recoat time	3 min	3 min	2 min	5 min	15 min	N/A
Dry time to handle	10 min	15 min	10 min	15 min	7 h	N/A
Cure time @ 22 °C [71.6 °F]	24 h	24 h	24 h	Heat cure only	48 h	UV light cure
Cure time @ 65 °C [149 °F]	30 min	30 min	30 min	—	4 h	UV light cure
Cure time @ 80 °C [176 °F]	20 min	15 min	10 min	16 h	2 h	UV light cure
Cure time @ 100 °C [212 °F]	10 min	5 min	5 min	2 h	40 min	UV light cure
CURED PROPERTIES						
IPC-CC-830	B revision	C revision	—	B revision	C revision	C revision
UL	94 V-0	746E	94 V-0	746E	Meets UL 94 V-0	746E
Dielectric strength	1 000 V/mil	1 100 V/mil	1 076 V/mil	1 000 V/mil	566 V/mil	1000 V/mil
Dielectric withstand voltage	> 1 500 V	> 1 500 V	> 1 500 V	> 1 500 V	> 1 500 V	> 1 500 V
Resistivity	4.6 x 10 ¹⁴ Ω·cm	3.5 x 10 ¹³ Ω·cm	3.5 x 10 ¹³ Ω·cm	3.5 x 10 ¹³ Ω·cm	1.8 x 10 ¹² Ω·cm	3.4 x 10 ¹⁴ Ω·cm
Constant service temperature	-65 — 125 °C	-65 — 130 °C	-40 — 200 °C	-65 — 125 °C	-40 — 140 °C	-65 — 125 °C
Glass transition temperature (T _g)	27 °C	38 °C	31 °C	57 °C	42 °C	72 °C
CTE prior T _g	72 ppm/°C	160 ppm/°C	111 ppm/°C	130 ppm/°C	210 ppm/°C	78 ppm/°C
Solderability	Excellent	Excellent	Fair	Good	Poor	Poor
Chemical resistance	Poor	Poor	Poor	Excellent	Excellent	Excellent
Pencil hardness (ABS)	HB, soft	H, hard	F, hard	HB, soft	2H, hard	2H, hard
AVAILABLE PACKAGING						
Net contents	55 mL bottle	—	55 mL bottle	55 mL bottle	1.35 L 2-can kit	—
	945 mL can	945 mL can	945 mL can	945 mL can	2.7 L 3-can kit	945 mL can
	3.78 L can	3.78 L can	3.78 L can	3.78 L can	10.8 L 3-can kit	3.78 L can
	18.9 L can	18.9 L can	18.9 L can	18.9 L can	60 L 3-can kit	—
	340 g aerosol	340 g aerosol	—	312 g aerosol	540 L 3-drum kit	—
	5 mL pen	—	5 mL pen	—	—	—

