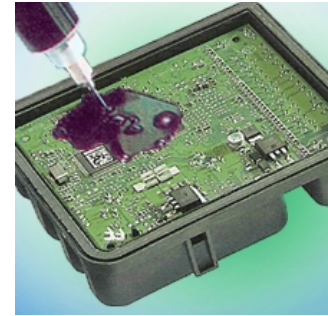


Dielectric Potting Adhesives

United Adhesives Inc. provides various dielectric adhesives for electronic potting applications. They have following features:

- High dielectric strength for voltage insulation
- Soft rubber and flexible to couple thermal stress
- Some products provide high thermal conductivity
- Some products provide superior high voltage resistance

They are typically applied to pot or encapsulate parts and cavities, seal lids, covers, housings, connectors, or coat various electronic parts to provide dielectric insulation, vibration dampening, thermal stress coupling, etc.



Name	SP4012	SP4018	SP4510	EP1582	EP1642	EP1660
Chemical Base	Silicone	Silicone	Silicone	Epoxy	Epoxy	Epoxy
Features / Advantages	Translucent fluid silicone. Readily flowable. Thermal cure to form firm rubbery dielectric gel. Non-corrosive.	Non-sag (thixotropic) version of SP4012. Dielectric firm rubber.	Addition cure, room temperature curable, silicone potting rubber.	Transparent epoxy potting or sealing for Opto-Electronic Applications.	High thermal conductivity. High bonding Strength. Low CTE. Easy flow	High voltage resistance. Low arching effect. Strong oil and chemical resistance.
Typical Application	Pot / encapsulate parts & cavities. Seal housings, lids. Coat electronic parts. Vibration dampening Thermal stress coupling	Encapsulate parts & cavities. Seal housings, lids. Coat electronic parts. Vibration dampening Thermal stress coupling	Pot / encapsulate parts & cavities. Seal housings, lids. Coat electronic parts. Vibration dampening Thermal stress coupling	Applying on LED Glob-Top, Optical Lens & IR Lens, Fiber optical, Lens, Prism, Endoscopes or Light Guides, etc.	Potting or sealing for high heat dissipations in electronics.	For high voltage insulation seal or encapsulation. High voltage component bonding or coating.
Rheology	Flowable, Dispensable	Dispensable	Dispensable	Capillary flowable	Flowable	Flowable, Dispensable
Appearance / Color	Translucent	Opaque	Opaque	Transparent	Grey - A Amber - B	Milky White or Grey
Part / Component	A/B = 1: 1	A/B =1:1	A/B = 1: 1	A/B =1:1	Two parts (1:1)	A/B =1:1
Viscosity @25C (cps, after mixing)	450	81,000	2,000	11,000	160,000	12,000
Pot / Work life (hr)	2 hrs	2 hrs	45 min	60 min	30 min	45 min
Cure Rate	125C 30 min	125C 30 min	RmT 6 hrs 125C 15 min	RmT 8 hr 85C 15 min	85C 120 min 125C 30 min	125C 60 min
Storage	< 25C	< 25C	< 25C	< 25C	< 30C	< 25C
Shelf Life	6 months @ 4C	6 months @ 4C	6 months @ 4C	12 month @ 24C	6 month @ 5C	6month @ 5C
Tg	-120C	-120C	-120C	78	85 to 125	125
CTE (ppm/C) ASTM D3386-94	< 300	< 300	< 300	< 160 (above Tg) < 80 (below Tg)	<100(> Tg) < 30 (<Tg)	120 (above Tg) 60 (below Tg)
Modulus or Hardness	Shore OO = 35	Shore A = 45	Shore A = 30	2.5 Gpa	Shore D = 70	5.6 Gpa
Volume Resistivity (Ohm-cm)	> 10E14	>10E14	>10E14	>10E12	> 10E+12	> 10E12
Dielectric Strength (V/mil)	> 480 V/mil	> 400 V/mil	450 V/mil	400 V/mil	500 V/mil	> 800
Adhesion (Al/Al Lap Shear)	N/A	N/A	N/A	> 1600 psi	> 1800 psi	> 1600 psi
Thermal Conductivity (W/mK)	N/A	N/A	N/A	N/A	1.5	N/A