



Potting & Encapsulation Materials

Catalog



ENGINEERING YOUR SUCCESS.



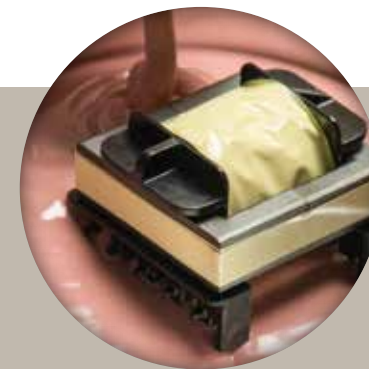
Parker LORD partners with customers to leverage expertise in multiple chemistries and diverse applications to develop customized solutions.

Design compromise not an option?

At Parker LORD, we have been developing custom potting and encapsulant solutions for more than 50 years. Whether utilizing epoxy, silicone or urethane polymer systems, we continue to deliver results for demanding applications in a wide variety of industries including automotive, energy, medical, aerospace, telecommunications and industrial electronics based on our customers' design and specification needs.

Our products offer diverse encapsulant application options including use in ignition coils, engine control modules, transmission control modules, sensors, power supplies, transformers and other critical electronic equipment.

If you need help choosing one of our standard potting and encapsulant products or if you need a custom material to meet your needs, let us help you determine an appropriate solution for your application.



SILICONES

Silicones are one of the most versatile chemistries and offer inherent flexibility spanning over a wide temperature range (-75°C to +200°C). Silicone products are widely known to protect fragile electronic components and modules where flame and high temperature resistance and permanent flexibility are top priorities. We offer addition-cured and condensation-cured silicones, either filled or unfilled.



EPOXIES

Epoxy provides strength, versatility, durability, adhesion, chemical resistance and high temperature tolerance in adhesive, potting and encapsulant applications. These products can be formulated to fit a variety of applications and requirements thanks to the wide availability of raw materials. We offer a wide range of epoxy products from extremely flexible to highly-rigid casting materials, either filled or unfilled, that are thermally and/or electrically conductive and flame retardant.



URETHANES

Urethanes are considered to be a great alternative to silicones when high temperature resistance is not required. For electronic packaging, urethanes are known to work best in low-temperature applications. They protect stress-sensitive electronic devices and act as a barrier against water. We offer low viscosity urethane products ranging from soft gels to semi-rigid casting materials that are designed to fit various potting application needs.

	Chemistry	Thermally Conductive	Components		Can be used with multiple hardeners	UL Rating	Appearance
			1K	2K			
CoolTherm® SC-6702	Silicone	x		x		UL 94 V-0	Red
CoolTherm SC- 6703	Silicone	x		x		UL 94 V-0	Light Gray
CoolTherm SC-6708 WHT / 6731	Silicone	x		x	x		White
CoolTherm SC-6709 / 6731	Silicone	x		x	x		White
CoolTherm SC-6710 RED / 6731	Silicone	x		x	x		Red
CoolTherm SC-6711 WHT / 6731	Silicone	x		x	x		White
CoolTherm SC-6725	Silicone	x		x			Red
CoolTherm SC-6726	Silicone	x		x			Red
CoolTherm SC-324	Silicone	x		x		UL 94 V-0	Light Pink
CoolTherm SC-252	Silicone	x		x			Gray
CoolTherm SC-104	Silicone	x		x		UL 94 V-0	Gray
CoolTherm SC-303	Silicone	x		x		UL 94 V-0, UL RTI 200°C	Gray
CoolTherm SC-305	Silicone	x		x		UL 94 V-0, UL RTI 170°C	Gray
CoolTherm SC-309	Silicone	x		x		UL 94 V-0, UL RTI 180°C	Gray
CoolTherm SC-320	Silicone	x		x		UL 94 V-0, UL RTI 180°C	Light Pink
CoolTherm SC-6712 WHT / 6730	Silicone			x	x		White
CoolTherm SC-6715 / 6730	Silicone			x	x		White
Circalok™ 6716 / 6733	Silicone			x			Black

Viscosity, cP @ 25°C	Mix Ratio by Weight	Cure Schedule	Hardness	Dielectric Strength, kV/mm (V/mil)	Thermal Conductivity, W/m-K	Description
30,000	1:1	16-24 hr @ 85°C	65 Shore A	17.1 (434)	0.7	High density, thermally conductive primerless silicone for encapsulating sensitive electronic modules
8,000	1:1	4 hr @ 65°C	60 Shore A	19.7 (500)	0.8	Two-component, thermally conductive silicone for encapsulating densely packed power units
30,000	100:0.5	12-16 hr @ 25°C; or 4 hr @ 65°C	60 Shore A	23.6 (600)	0.8	Thermally conductive silicone with good electrical properties
32,000	100:0.5	12-16 hr @ 25°C	60 Shore A	21.6 (550)	1.0	Two-component, thermally conductive silicone with outstanding electrical properties
20,000	100:0.5	12-16 hr @ 25°C	65 Shore A	19.7 (500)	1.0	Two-component, low viscosity, thermally conductive RTV silicone for applications requiring low stress, rapid heat transfer, high temperature and repairability
30,000	100:0.5	12-16 hr @ 25°C	60 Shore A	19.7 (500)	1.0	Two-component, thermally conductive silicone with outstanding electrical properties
15,000	1:1	4 hr @ 85°C	45 Shore A		1.16	High density, thermally conductive, primerless silicone
56,000	1:1	4 hr @ 85°C	70 Shore A	13.8 (350)	0.8	High density, thermally conductive, primerless silicone
30,000	1:1	24 hr @ 25°C; or 60 min @ 125°C	50 Shore A	7.4 (188)	4.0	Two-component, high thermally conductive silicone for electrical/electronic encapsulating applications
18,000	1:1	24 hr @ 25°C; or 30 min @ 120°C	60 Shore A	8.7 (220)	2.5	Two-component, medium thermally conductive silicone which can be cured at relatively low temperature
7,000	1:1	24 hr @ 25°C; or 10-15 min @ 100°C	65 Shore A	17.3 (440)	0.8	Two-component, thermally conductive silicone
6,000	1:1	24 hr @ 25°C; or 10-15 min @ 100°C	45 Shore A	17.3 (440)	0.9	Two-component, thermally conductive silicone for encapsulating applications requiring high heat dissipation
4,000	1:1	24 hr @ 25°C; or 10 min @ 100°C	60 Shore A	19.7 (500)	0.7	Two-component, thermally conductive silicone for the protection of electrical/electronic applications where heat dissipation is critical
3,600	1:1	24 hr @ 25°C; or 10 min @ 120°C	45 Shore A	23.6 (600)	1.0	Two-component, thermally conductive silicone for the protection of electrical/electronic applications where heat dissipation is critical
22,000	1:1	24 hr @ 25°C; or 60 min @ 125°C	54 Shore A	7.9 (200)	3.0	Two-component, thermally conductive silicone for the protection of electrical/electronic applications where heat dissipation is critical
7,000	10:1	12 hr @ 25°C; or 2 hr @ 65°C	35 Shore A	19.7 (500)		Two-component, solvent-free silicone for potting and encapsulating densely packed components and making flexible molds
12,000	10:1	24 hr @ 25°C; or 2-4 hr @ 65°C	35 Shore A	19.7 (500)		Two-component, solvent-free silicone for potting and encapsulating densely packed components and making flexible molds
10,000	100:2.5	12-16 hr @ 25°C	45 Shore A	19.7 (500)		Solvent-free silicone for potting and encapsulating low- and high-voltage electrical assemblies

	Chemistry	Thermally Conductive	Components		Can be used with multiple hardeners	UL Rating	Appearance
			1K	2K			
CoolTherm SC-6717 / 6731	Silicone			x			Red
Circalok 6735	Silicone			x			Clear
Circalok 6744	Silicone			x			Black
Thermoset™ SC-300M	Silicone			x			Clear
Thermoset SC-316	Silicone			x			White
Thermoset SC-318S	Silicone		x				Green
Thermoset SC-319	Silicone			x			Black
Circalok 6756	Adhesion Promoter - Silicone		x				Clear or Red
LORD® P-1291	Adhesion Promoter - Silicone		x				Clear or Red
LORD P-1292	Adhesion Promoter - Silicone		x				Blue
CoolTherm EP-3500	Epoxy	x		x			Dark Gray
CoolTherm EP-6006 HS / 6011	Epoxy	x		x		UL 94 V-0	Black
CoolTherm EP-6007 BLK / 6010	Epoxy	x		x	x	UL 94 V-0	Black
CoolTherm EP-6035	Epoxy	x		x		UL 94 V-0	Black
CoolTherm EP-6037 / 6252	Epoxy	x		x	x		Black or Green
CoolTherm EP-340 / 70	Epoxy	x		x	x	UL 94 HB (only with Thermoset Hardener No. 70)	Black
CoolTherm EP-301 AD / 6010	Epoxy	x		x			Black or White
CoolTherm EP-343	Epoxy	x		x			Black
CoolTherm EP-6150	Epoxy	x	x				White
Thermoset EP-937	Epoxy		x				Black

Viscosity, cP @ 25°C	Mix Ratio by Weight	Cure Schedule	Hardness	Dielectric Strength, kV/mm (V/mil)	Thermal Conductivity, W/m-K	Description
15,100	100:5	8-12 hr @ 25°C	60 Shore A	19.7 (500)		Two-component, condensation curing, solvent-free silicone RTV for potting, encapsulating or coating applications
3,500	10:1	4 hr @ 65°C	40 Shore A	17.7 (450)		Clear, low viscosity, two-component silicone that produces a clear, flexible elastomer that adheres to most substrates without a primer
2,700	1:1	2 hr @ 25°C; or 45 min @ 65°C	55 Shore A	17.7 (450)		Low viscosity, flame retardant, room temperature curing silicone
160	1:1	24 hr @ 25°C	Gel	19.7 (500)		Electronic-grade silicone gel encapsulant
200	1:1	1 hr @ 25°C	Gel	19.7 (500)		Electronic-grade silicone gel encapsulant
45,000		45-75 min @ 125°C; or 30-60 min @ 150°C	40 Shore OO			One-component, rapid cure silicone designed for use as an encapsulant or coating to protect electronic devices
1,000	1:1	2 hr @ 25°C	70 Shore OO			Two-component, room temperature curing silicone encapsulant
1		60-90 min @ 25°C				Primer for bonding RTV silicones to metal and glass
5		30-60 min @ 25°C				Electronic-grade primer for bonding tin-catalyzed RTV silicone to most metals and glass
5		30-60 min @ 25°C				Electronic-grade primer for bonding platinum-catalyzed RTV silicone to most metals and glass
8,000 @ 60°C	1:1	Staged Cure: 2 hr each @ 120°C, 150°C, 180°C & 210°C	90 Shore D	15.4 (390)	3.3	Two-component, electrically insulating epoxy encapsulant with very high thermal conductivity, low thermal expansion and high-temperature stability
22,500	100:17.5	24 hr @ 25°C; or 2 hr @ 65°C	90 Shore D	19.7 (500)	1.1	Thermally conductive, low shrinkage, two-component epoxy
14,200	100:5.5	12-16 hr @ 25°C	85 Shore D	19.3 (490)	0.6	Thermally conductive adhesive and potting compound
12,000	1:1	24 hr @ 25°C; or 2 hr @ 65°C	75 Shore D	18.7 (475)	1.0	Low viscosity, flame retardant, room temperature curing epoxy
25,000	100:7.1	24 hr @ 25°C; or 2 hr @ 65°C	92 Shore D	>15.7 (>400)	1.1	Two-component epoxy for the semiconductor industry
10,000	100:7	24 hr @ 25°C	90 Shore D	16.9 (430)	1.5	Filled, thermally conductive epoxy for use with various hardeners
10,350	100:5.3	24 hr @ 25°C; or 2 hr @ 65°C	87 Shore D	19.7 (500)	1.3	Thermally conductive casting epoxy
55	100:3.9	2 hr @ 65°C followed by 4 hr @ 135°C	90 Shore D	59 (1,500)	1.1	Two-component, thermally conductive, dielectric epoxy coating
145,000		30 min @ 121°C; or 10 min @ 177°C	90 Shore D	17.7 (450)	0.6	One-component, thixotropic epoxy for assembling electronic components and devices
47,900		18-28 min @ 120°C; or 6-12 min @ 150°C	88-94 Shore D			One-component, fast curing epoxy

	Chemistry	Thermally Conductive	Components		Can be used with multiple hardeners	UL Rating	Appearance
			1K	2K			
CoolTherm ES-21	Epoxy		x				Black
CoolTherm EP-6008 BLK/6010	Epoxy	x		x	x		Black
CoolTherm EP-6009	Epoxy	x		x		UL 94 V-0	Black
Circalok 6021	Epoxy			x			Gray
Circalok 6022	Epoxy			x			Yellow
CoolTherm EP-6028/6029	Epoxy	x		x			Blue
Thermoset 300/70	Epoxy			x	x		Black
LORD 600/70	Epoxy			x	x		Clear Amber
Thermoset DC-80	Epoxy			x			Gray
Thermoset DC-946	Epoxy			x			Black
CoolTherm EP-636	Epoxy	x		x			Gray
Thermoset EP-20/70	Epoxy			x	x		Black
Thermoset ES-40/70	Epoxy			x	x		White
Thermoset ES-100	Epoxy			x			Black
Thermoset ES-115	Epoxy			x			Tan
Thermoset ES-121 LV/EP-809	Epoxy			x			Black
Thermoset MP 110-10	Epoxy			x			Black
Thermoset Hardener No. 18	Epoxy			x			Amber
Thermoset Hardener No. 25	Epoxy			x			Amber
Thermoset Hardener No. 37	Epoxy			x			Amber
Thermoset Hardener No. 65	Epoxy			x			Tan

Viscosity, cP @ 25°C	Mix Ratio by Weight	Cure Schedule	Hardness	Dielectric Strength, kV/mm (V/mil)	Thermal Conductivity, W/m-K	Description
35,000		60 min @ 125°C	88 Shore D			One-component, fast curing epoxy containing a fluorescent dye for detection under UV light
6,800	100:7	12 hr @ 25°C; or 2 hr @ 65°C	85 Shore D	17.7 (450)	0.3	Filled, low viscosity, general purpose potting and encapsulating epoxy
2,600	10:1	2-4 hr @ 65°C	90 Shore D	19.7 (500)	0.7	Two-component epoxy
200,000	100:85	24 hr @ 25°C; or 2 hr @ 65°C	85 Shore D	15.7 (400)		Two-component, room temperature curing epoxy with long working life, good peel strength and adhesion to metals, plastics, fiberglass and wood
50,000	100:87	24 hr @ 25°C	67 Shore D	17.7 (450)		Two-component, room temperature curing epoxy with good peel strength and adhesion to metals, plastics, fiberglass and wood
15,000	1:1	3-4 hr @ 100°C	90 Shore D	17.7 (450)	0.45	Filled, two-component epoxy for potting high voltage transformers, especially for high temperature devices
2,000	100:15	24 hr @ 25°C	88 Shore D	15 (380)		Filled, thermal shock resistant epoxy for use with various hardeners
550	100:30	24 hr @ 25°C	82 Shore D			Unfilled, moderate viscosity epoxy for use with various hardeners
Thixotropic Paste	1:1	24 hr @ 25°C; 5 min @ 121°C	82 Shore D			Epoxy used in varying mix ratios to provide optimum properties
12,000	1:1	2-3 hr @ 95°C	86 Shore D			Two-component, heat curing epoxy with excellent thermal shock resistance
50,000	100:1	16-24 hr @ 50-65°C followed by 2 hr each @ 95°C, 150°C & 205°C	95 Shore D	18.3 (464)	0.7	Ultra-high temperature resistant encapsulating epoxy
550	100:30	24 hr @ 25°C	82 Shore D			Black, unfilled, moderate viscosity epoxy for use with various hardeners
550	100:30	24 hr @ 25°C	82 Shore D			Unfilled, moderate viscosity epoxy for use with various hardeners
1,200	1:1	3-4 hr @ 80°C	70 Shore OO	15.7 (400)		Two-component epoxy for encapsulating intricate electronic components in automotive, marine and heavy industrial applications
85,000	1:1	2.5 hr @ 85°C plus 1.5 hr @ 125°C	90 Shore D	>25 (>635)		Two-component epoxy for high voltage, automotive ignition coils
6,000	100:29	2.5 hr @ 90°C followed by 2.5 hr @ 140°C	>90 Shore D	30 (762)		Two-component epoxy for high voltage, automotive ignition coils
75,000	1:1 by Volume	2 hr @ 25°C plus 1 hr @ 80°C	45 Shore A	>15.7 (>400)		Unfilled epoxy with good thermal shock performance and excellent chemical resistance
50	100:14 (with 600 Resin)	24 hr @ 25°C (with 600 Resin)	88 Shore D (with 600 Resin)			Room temperature hardener
5,000	1:1 (with 600 Resin)	24 hr @ 25°C (with 600 Resin)	80 Shore D (with 600 Resin)			High surface gloss, fast setting, moisture insensitive hardener
40,000	1:1 (with 600 Resin)	24 hr @ 25°C; or 5 min @ 93°C (with 600 Resin)	84 Shore D (with 600 Resin)			Hardener that produces epoxies with improved flexibility and impact strength
50	100:40 (with 600 Resin)	24 hr @ 25°C (with 600 Resin)	85 Shore D (with 600 Resin)			High surface gloss, long working life, moisture insensitive hardener

	Chemistry	Thermally Conductive	Components		Can be used with multiple hardeners	UL Rating	Appearance
			1K	2K			
Thermoset Hardener No. 66	Epoxy			x			Amber
Thermoset Hardener No. 67	Epoxy			x			Clear
Thermoset Hardener No. 70	Epoxy			x			Tan
Thermoset Hardener No. 71	Epoxy			x			Light Amber
Thermoset Hardener No. 72	Epoxy			x			Black
LORD AP-134	Adhesion Promoter - Epoxy or Urethane		x				Clear, Straw Yellow
CoolTherm UR-288	Urethane	x		x		UL 94-HB	Black
CoolTherm UR-388	Urethane	x		x		UL 94 V-0	Black
CoolTherm UR-388 FST	Urethane	x		x		UL 94 V-0	Black
CoolTherm UR-389	Urethane	x		x			Black
Circalok 6403	Urethane			x			Amber or Black
Thermoset UR-105	Urethane			x			Black
Thermoset UR-312	Urethane			x			Clear
Thermoset UR-325	Urethane			x			Black

Viscosity, cP @ 25°C	Mix Ratio by Weight	Cure Schedule	Hardness	Dielectric Strength, kV/mm (V/mil)	Thermal Conductivity, W/m-K	Description
12,000	100:50 (with 600 Resin)	24 hr @ 25°C (with 600 Resin)	85 Shore D (with 600 Resin)			General purpose hardener well-suited for a variety of applications
30	100:24 (with 600 Resin)	2 hr @ 100°C (with 600 Resin)	92 Shore D (with 600 Resin)			Long working life, heat curing hardener with high Tg
30	100:30 (with 600 Resin)	24 hr @ 25°C (with 600 Resin)	82 Shore D (with 600 Resin)			High impact strength hardener
125	1:1 (with 600 Resin)	24 hr @ 25°C (with 600 Resin)	60 Shore D (with 600 Resin)			Semi-rigid, low exotherm hardener
7,000	1:1 (with 300 Resin)	24 hr @ 25°C (with 300 Resin)	65 Shore D (with 300 Resin)	14.6 (370) (with 300 Resin)		Filled, room temperature curing hardener with low exotherm and semi-rigid encapsulation
3.5		1-2 hr @ 25°C				Moisture-cure primer for epoxy or polyurethane
4,900	100:20	24 hr @ 25°C or 6 hr @ 60°C	90 Shore A		0.4	Two-component, room temperature curing, flame retardant urethane potting compound
6,000	100:20	24 hr @ 25°C or 6 hr @ 60°C	90 Shore A	15.0 (388)	0.7	Two-component, flame retardant, semi-flexible urethane for encapsulating and casting applications
6,000	100:20	30 min @ 25°C	88 Shore A	15.0 (388)	0.7	Two-component, flame retardant, semi-flexible urethane for encapsulating and casting applications
14,000	100:23	24 hr @ 25°C; or 2 hr @ 70°C	45 Shore D	16 (406.4)	0.7	Two-component, flame retardant, semi-flexible urethane for encapsulating and casting applications
900	22:10	30-45 min @ 25°C	80 Shore A	23.6 (600)		General purpose, encapsulating urethane for applications requiring a fast cure, mechanical shock resistant system
1,500	100:9	24 hr @ 25°C; or 3 hr @ 75°C	25 Shore A	13.5 (344)		Two-component, room temperature curing urethane encapsulating compound
1,500	100:55 2:1 by volume	24 hr @ 25°C; or 2 hr @ 85°C	50 Shore OO	>11.8 (>300)		Microelectronic grade, clear, low modulus urethane encapsulating gel
4,000	4:1	24 hr @ 25°C	60 Shore A	25.6 (650)		Two-component, room temperature curing, urethane encapsulating compound

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