



THERMALLY CONDUCTIVE ADHESIVES & ENCAPSULANTS

Highlights

- Wide range of thermal management solutions available in epoxy, urethane, and silicone chemistries for bonding, encapsulating, or potting applications.
- Products are available in 1 component or 2 components. Some products are available in Triggerbond®, a convenient dual barrel cartridge.
- Viscosities range from 1000cps to pastes.
- Pot life ranges from 15 minutes to 5 hours.
- Excellent thermal conductivity performance with up to 4.5 W/m.K.
- Broad operating temperature range, from as low as -70° C and as high as +235° C.
- Range of products meet different standards such as flame retardant UL 94 V-0 Listed, low outgassing NASA ASTM E595, and CTI greater than 600 volts.
- Variety of formulations offer different properties such as low stress, low coefficient of thermal expansion, high tensile, and compressive strength.



Thermally conductive adhesives

Product	Description	Chemistry	Color	Mix Ratio*	Pot life (minutes)	Viscosity (cps)	Thermal Conductivity (W/mK)	Operating Temperature Range (° C)	Product Approval
50-3120A**	1 component epoxy adhesive with a wide operating temperature range.	Epoxy	Gray	-	N/A	Paste	1.85	-40 to +165	-
50-3122A**	1 component epoxy adhesive with a wide operating temperature range.	Epoxy	Gray	-	N/A	165,000	1.44	-60 to +205	NASA ASTM E595
50-3112A	Fast curing epoxy adhesive for use in the TriggerBond® system.	Epoxy	Gray	1:1	15	70,000	1.04	-40 to +120	-
50-3141FR	Fast curing, flame retardant epoxy adhesive available in TriggerBond®.	Epoxy	Black	2:1	18	Paste	1.1	-50 to +135	-
50-3186NC with CAT.185**	Thixotropic epoxy adhesive with low coefficient of thermal expansion.	Epoxy	Black, Blue	100:19	60	Paste	1.38	-40 to +230	-
50-3186NC with CAT.190	Thixotropic epoxy adhesive with low coefficient of thermal expansion and room temperature cure.	Epoxy	Black, Blue	100:3	60	Paste	1.38	-40 to +230	-
70-3812NC	Aluminum filled epoxy with excellent thermal conductivity of 4.5 W/mK.	Epoxy	Gray	100:10	300	8,000	4.5	-55 to +155	NASA ASTM E595

Thermally conductive encapsulants/potting

50-1225	Flexible silicone that offers high heat resistance.	Silicone	White	10:1	30	32,000	1.73	-65 to +210	-
50-1952	Deep section curing silicone with easy to use 1:1 mix ratio.	Silicone	Gray	1:1	90	30,000	1.1	-65 to +235	-
50-2151FR	Flame retardant, 50 Shore D urethane potting compound.	Urethane	Tan	100:12	70	10,000	1.15	-55 to +130	-
50-2366FR	Flame retardant, fungus resistant, 65 Shore D potting compound.	Urethane	Black	100:20	60	9,000	1.15	-65 to +135	-
50-2368FR	Flame retardant, 65 Shore D potting compound. Faster curing version of 50-2366FR.	Urethane	Black	100:20	30	4,000	1.15	-65 to +135	-
50-2369FR	UL 94 V-0 Listed, 75 Shore D, fungus resistant potting urethane.	Urethane	Gray	100:20	30	8,500	1.15	-65 to +135	UL 94 V-0 Listed
50-3100 with CAT.190	High heat transfer, low settling encapsulating and potting epoxy.	Epoxy	Black, Gray	100:5	90	32,000	2.16	-65 to +135	-
50-3100 with CAT.30	High heat transfer epoxy resin suitable for operating temperatures near 200° C.	Epoxy	Black, Gray	100:9	90	29,000	2.16	-60 to +205	-
50-3100 with CAT.150	High heat transfer, low settling, low viscosity encapsulating and potting epoxy.	Epoxy	Black, Gray	100:12	90	6,000	2.16	-65 to +135	-

*The mix ratio for Triggerbond® products is by volume; all other products are by weight. For products with variable mix ratios, refer to the product data sheet for more information.

** Heat cure only

Δ RoHS Compliant only. All other products are REACH and RoHS Compliant.

Thermally conductive encapsulants/potting (continued)

Product	Description	Chemistry	Color	Mix Ratio*	Pot life (minutes)	Viscosity (cps)	Thermal Conductivity (W/mK)	Operating Temperature Range (° C)	Product Approval
50-3100FR with CAT.190	Flame retardant high heat transfer epoxy resin.	Epoxy	Gray	100:5	90	32,000	1.9	-60 to +135	-
50-3100FR** with CAT.30	Flame retardant high Thermal K heat transfer epoxy resin suitable for operating temperatures near 200° C.	Epoxy	Gray	100:9	90	29,000	1.9	-60 to +200	-
50-3100FR with CAT.150	Flame retardant high heat transfer epoxy resin, low viscosity version.	Epoxy	Gray	100:12	90	6,000	1.9	-60 to +135	-
50-3107 with CAT.190	Self-extinguishing potting compound that meets UL 94 V-0 requirements.	Epoxy	Black	100:6	45	7,500	1.57	-40 to +150	-
50-3107 with CAT.240	Self-extinguishing potting compound with a long pot life that meets UL 94 V-0 requirements.	Epoxy	Black	100:13	180	1,700	1.57	-40 to +150	-
50-3116	Low viscosity, flexible epoxy potting and encapsulating system.	Epoxy	Black	100:5.4	180	10,200	1.01	-70 to +150	-
50-3150FR with CAT.12	Low viscosity, potting and encapsulating UL 94 V-0 listed epoxy with excellent electrical insulation properties.	Epoxy	Black	100:12	60	2,000	2.16	-40 to +135	UL 94 V-0 Listed
50-3150FR with CAT.30**	UL 94 V-0 listed epoxy suitable for operating temperatures near 200° C with excellent electrical insulation properties.	Epoxy	Black	100:10	240	17,000	2.16	-60 to +200	UL 94 V-0 Listed
50-3150FR with CAT.150A	Low viscosity, potting and encapsulating epoxy with excellent electrical insulation properties.	Epoxy	Black	100:17	60	1,500	2.16	-40 to +135	-
50-3150FR with CAT.154	Low viscosity, potting and encapsulating epoxy with excellent electrical insulation properties. REACH compliant version of 50-3150 with CAT.150.	Epoxy	Black	100:17	60	1,500	2.16	-40 to +135	-
50-3150FR with CAT.190	Excellent electrical insulation epoxy that is UL 94 V-0 listed and passes low outgassing NASA ASTM E595 standard.	Epoxy	Black	100:5	60	28,000	2.16	-40 to +135	UL 94 V-0 Listed NASA ASTM E595
50-3151NCFR with CAT.150	Very low viscosity potting epoxy that meets UL 94 V-0 requirements.	Epoxy	Black	100:17	60	880	1.3	-40 to +135	-
50-3151NCFR with CAT.190	Low viscosity, room temperature cure potting epoxy that meets UL 94 V-0 requirements.	Epoxy	Black	100:5	60	6,500	1.3	-40 to +135	-
50-3151NCFR with CAT.30**	Low viscosity potting epoxy that meets UL 94 V-0 requirements. Suitable for high operating temperatures near 200° C.	Epoxy	Black	100:11	240	6,500	1.3	-65 to +190	-

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Thermally conductive encapsulants/potting (continued)

Product	Description	Chemistry	Color	Mix Ratio*	Pot life (minutes)	Viscosity (cps)	Thermal Conductivity (W/m·K)	Operating Temperature Range (°C)	Product Approval
50-3152FR	Potting and encapsulating UL 94 V-0 listed epoxy with a CTI > 600 Volts.	Epoxy	Black	1:1	100	31,000	1.01	-40 to +135	UL 94 V-0 Listed
50-3155 with CAT.30**	Low viscosity, thermally conductive epoxy with excellent dielectric properties.	Epoxy	Black	100:9	60	6,000	1.93	-55 to +205	
50-3155 with CAT.140	Low viscosity, thermally conductive epoxy with excellent electrical properties.	Epoxy	Black	100:9	60	5,000	1.93	-40 to +135	
50-3170	Repairable epoxy rubber for low stress encapsulation.	Epoxy	Black	100:4	180	15,000	1.73	-70 to +150	
50-3182NC with CAT.30**	Highly filled epoxy with high tensile and compressive strength. Suitable for high operating temperatures near 200° C.	Epoxy	Black, Blue, White	100:6.5	240	45,000	1.66	-55 to +205	
50-3182NC with CAT.140	Highly filled epoxy with high tensile and compressive strength. Low viscosity option.	Epoxy	Black, Blue, White	100:7	60	15,000	1.66	-55 to +150	
50-3182NC with CAT.190	Highly filled epoxy with high tensile and compressive strength.	Epoxy	Black, Blue, White	100:3	60	90,000	1.66	-55 to +150	
50-3185NC with CAT.30**	Epoxy encapsulant with a low coefficient of thermal expansion suitable for high operating temperatures and passes the low outgassing NASA ASTM E595 standard.	Epoxy	Black	100:7	240	21,000	1.36	-55 to +205	NASA ASTM E595
50-3185NC with CAT.140	Low coefficient of thermal expansion epoxy encapsulant.	Epoxy	Black	100:7	60	3,400	1.36	-55 to +150	
50-3185NC with CAT.190	Low coefficient of thermal expansion epoxy encapsulant that passes the low outgassing NASA ASTM E595 standard.	Epoxy	Black	100:3	60	17,000	1.36	-55 to +150	NASA ASTM E595
50-3253FR	1:1 mix ratio system that meets UL 94 V-0 requirements.	Epoxy	Black	1:1	60	60,000	1.6	-65 to +155	

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Applications

- Heat Sink Bonding
- Encapsulants or Potting for
 - PCBA Power Supplies
 - EV Battery Charger and Transformer
 - Electric Motors
- Thermal Interface Materials
 - Capacitors, Batteries & Coils
 - Insulators, Sensors & Devices for Intrinsic Safety

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