

MASTER BOND THERMALLY CONDUCTIVE APPLICATION SELECTOR GUIDE

Selected Thermally Conductive, Electrically Insulating Adhesives, Sealants, Coatings, Encapsulants & Potting Compounds
Partial Listing Only — Other Grades Available

Two Component Epoxies —

Master Bond Grade	Mix Ratio by weight	Color Code	Mixed Viscosity RT, cps	Set-Up Time Minutes, RT	Cure Schedule Temp/Time, °F	Service Temp Range, °F	Thermal Cond, BTU·in/ft ² ·hr·°F	Applications
EP21AO	100/100	"A" gray "B" white	light paste	45-60	24-48 hrs @ RT 2-3 hrs @ 200 °F	-60 to +250 °F	10	High strength, general purpose system. Easy to process. Widely used for bonding heat sinks.
EP21AOHT	100/100	"A" gray "B" off white	paste	60-80	24-48 hrs @ RT 1-2 hrs @ 200 °F	-60 to +400 °F	10	High temperature resistant version of EP21AO. Also has enhanced chemical resistance properties.
EP21ANHT	100/100	"A" light gray "B" light gray	paste	60-80	24-48 hrs @ RT 1-2 hrs @ 200 °F	-60 to +400 °F	23	High conductivity version of EP21AOHT. Excellent for bonding heat sinks and thermistors.
EP21AOLV	100/100	"A" gray "B" white	40,000- 50,000	75-90	24-48 hrs @ RT 2-3 hrs @ 200 °F	-60 to +250 °F	10	Low viscosity version of EP21AO. Good flowability. For potting and encapsulating. Convenient processing.
EP21TDCAOHT	100/100	"A" gray "B" off white	paste	120-140	24-48 hrs @ RT 2-3 hrs @ 200 °F	-60 to +400 °F	10	Toughened system with high peel and shear strength. Good resistance to high vibration and mechanical shock.
EP21TDCANHT	100/100	"A" gray "B" gray	paste	120-140	24-48 hrs @ RT 2-3 hrs @ 200 °F	-60 to +400 °F	25	High conductivity version of EP21TDCAOHT. Bonds well to dissimilar substrates. Good thermal cycling properties.
EP21TDC-2AO	33/100	"A" white "B" off white	paste	90-120	48-72 hrs @ RT 3 hrs @ 200 °F	-100 to +250 °F	10	Excellent flexibility. Superb for bonding substrates with greatly differing coefficients of expansion.
EP21TCHT-1	100/66	"A" off white "B" off white	light paste	30-35	18-24 hrs @ RT 1-2 hrs @ 200 °F	4 °K to +400 °F	11	NASA low outgassing certified. Excellent adhesive and sealant, particularly in high vacuum applications.
EP30AO	100/10	"A" off white "B" clear	15,000- 20,000	30-40	24-36 hrs @ RT 1-2 hr @ 200 °F	-60 to +250 °F	10	Low viscosity. Good flowability. Primarily for potting and encapsulating. Excellent physical strength profile.
EP30AN	100/10	"A" gray "B" clear	20,000- 30,000	30-40	24-36 hrs @ RT 1-2 hrs @ 200 °F	-60 to +250 °F	25	High thermal conductivity version of EP30AO. Excellent electrical insulation properties. Very low shrinkage.
EP30BN	100/10	"A" white "B" clear	15,000- 25,000	30-40	24 hrs @ RT 1-2 hrs @ 200 °F	-60 to +250 °F	24	Special high conductivity, low density system. For light-weight aerospace potting applications.
EP30AOHT	100/10	"A" off white "B" clear	70,000- 80,000	30-35	24-36 hrs @ RT 1-2 hrs @ 200 °F	-60 to +400 °F	10	High temperature resistant version of EP30AO. For potting and encapsulating. Excellent flow properties.
EP30ANHT	100/10	"A" light gray "B" clear	70,000- 80,000	30-35	24-36 hrs @ RT 1-2 hrs @ 200 °F	-60 to +400 °F	23	High thermally conductive version of EP30AOHT. Also for potting & encapsulation. Low coefficient of expansion.
EP30AN-1	100/10	"A" gray "B" clear	20,000- 30,000	30-40	24 hrs @ RT 1-2 hrs @ 200 °F	-60 to +250 °F	25	NASA approved low outgassing version of EP30AN. For high vacuum bonding & potting applications.
EP37-3FLFAO	100/100	"A" white "B" white	18,000- 22,000	3 hrs	4-5 days @ RT 4-6 hrs @ 200 °F	-80 to +250 °F	10	High flexibility and elongation. Low viscosity. For potting and encapsulation. Offers easy repairability.
EP51M-AO	100/100	"A" gray "B" amber	paste	3-5 min	2-4 hrs @ RT	-60 to +250 °F	10	Extremely fast curing, easily processable system with good physical strength properties.
EP121AO	100/80	"A" white "B" white	35,000- 45,000	12-24 hrs	3 hrs @ 200 °F plus 8-10 hrs @ 300 °F	-60 to 500 °F	10	For high temperature potting. Low viscosity. Excellent electrical insulation properties. Requires heat cure.
Supreme 11AO	100/100	"A" gray "B" amber	paste	20-30	24 hrs @ RT 1 hr @ 200 °F	-100 to +250 °F	10	Toughened system. For bonding and sealing. High shear and peel strength. Superior shock resistance.
Supreme 11AOHT	100/100	"A" gray "B" white	paste	25-50	24-36 hrs @ RT 1 hr @ 200 °F	-100 to +400 °F	10	High heat resistant version of Supreme 11AO. Good thermal cycling properties with dissimilar substrates.
Supreme 11ANHT	100/100	"A" gray "B" white	paste	25-50	24-36 hrs @ RT 1 hr @ 200 °F	-100 to +400 °F	25	High thermal conductivity version of Supreme 11AOHT with similar electrical and physical strength properties.

One Component Epoxies —

Master Bond Grade	Viscosity RT, cps	Color Code	Storage Stability, RT	Cure Schedule Temp/Time, °F	Service Temp Range, °F	Thermal Cond, BTU·in/ft ² ·hr·°F	Applications
EP3RR-1	120,000-150,000	light yellow	3 months@75°F 6 months@40°F	5-10 min @ 300°F 20-30 min @ 220-230°F	-60 to +400°F	6	Rapid curing, toughened system. Excellent flowability. For potting and underfill applications.
EP3AOHT	paste	gray	6 months	5-10 min @ 300°F 20-30 min @ 250°F	-60 to +400°F	10	Fast curing adhesive/sealant with high bond strength and low shrinkage. Widely used in chip bonding.
EP36AO	semi-solid melts at 180°F	light tan	6 months	2 hrs @ 300°F uncured material reusable	-100 to +500°F	10	Excellent heat resistance. Good flexibility. Used for potting. Passes Class H thermal insulation specs.
EP36AN	semi-solid melts at 180°F	light gray	6 months	2 hrs @ 300°F uncured material reusable	-100 to +500°F	25	Higher thermally conductive version of EP36AO. Excellent thermal shock and cycling resistance.
FL901AO	film	gray	6 months @ 40°F	1 hr @ 250°F 30-40 min@300°F	-100 to +400°F	10	Film adhesive/sealant. Standard size is 2" x 6" x 3 mils thick. Other sizes and preforms available.
Supreme 3AOHT	paste	off-white to light yellow	6 months	5-10 min @ 300°F 20-30 min @ 250°F	-100 to +350°F	10	Rapid curing. Good mechanical & electrical insulation properties. Bonds well to dissimilar substrates.
Supreme 3ANHT	smooth paste	gray	6 months	10 min @ 300°F 30 min @ 250°F	-100 to +400°F	22	High thermally conductive version of Supreme 3AOHT. Superior thermal cycling & shock resistant properties.
Sup. 3HTND-2GTAO	thixotropic paste	light yellow	6 months	5-10 min @ 300°F	-60 to +350°F	8	Thermally conductive glob top. Low ionic impurities. Creates low stress for delicate components.
Supreme 10AOHT	paste	light gray	6 months	45 min @ 300°F 60 min @ 250°F	-100 to +400°F	10	High performance, toughened adhesive/sealant. Good electrical insulator. Exceptional bond strength.
Supreme 10ANHT	paste	gray	6 months	45 min @ 300°F 60 min @ 250°F	-100 to +400°F	24	High thermally conductive version of Supreme 10AOHT. Superb dimensional stability & shock resistance.

Miscellaneous —

Master Bond Grade	Color	Mix Ratio by weight	Viscosity cps	Storage Stability, RT	Cure	Service Temp Range, °F	Thermal Cond, BTU·in/ft ² ·hr·°F	Applications
MasterSil 705TC	white	one part	paste	6 months	air (moisture) 24-48 hrs	-75 to +400°F	15	Silicone adhesive/sealant with high flexibility & excellent temperature resistance. Exceptionally easy processing.
X-5TC	tan	one part	paste	3 months	solvent evaporation 8-12 hrs	-75 to +250°F	11	Easy to use rubber based adhesive system. Good bond strength and flexibility. Convenient processing.

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