

# COTRONICS' HIGH TEMPERATURE EPOXY-BASED ADHESIVE PROPERTIES

FEATURES	CONDUCTIVE		500°F ROOM TEMP. CURES				600°F ULTRA TEMP.			MACHINABLE		ONE PART
Cat No.	120	132	4461	4525	4538	7050	4460	4700	4703	4540	454B	4420
<b>Properties</b>	Super Electrical Conductive	High Thermal Conductive	Low Viscosity Adhesive and Coating	General purpose Adhesive and Potting	Super Flexible Stress Free Adhesive	Nylon Bonder Bonds Most Surfaces	Hi-Temp. Low Viscosity and Coating	Hi-Temp Gen. Purpose Adhesive and Casting	Ultra Temp. Tooling Repairs	Machinable Aluminum Casting and Repairs	Machinable Non-Sag Putty Adhesive	One Component Structural
Maximum Temp	500°F	500°F	500°F	500°F	450°F	450°F	600°F	600°F	650°F	500°F	450°F	450°F
Components - Color	2-Silver	2-Silver	2-Amber	2-Black	2-Tan	2-Black	2-Amber	2-Black	2-Black	2-Silver	2-Silver	1-Gray
Mixed Viscosity (cps)	300,000	14,500	3,600	12,400	17,200	5,000	1,600	15,500	50,000	15,000	100,000	Paste
Mixed Density (gm/cc)	3.8	1.8	1.1	1.7	1	1.3	1.1	1.8	1.8	1.9	1.9	1.2
Hardness (Shore D)	70	75	90	90	60-80A	70	90	94	95	80	80	75
Tensile Strength (psi)	6,500	7,200	9,500	10,000	6,000	5,000	10,300	11,100	11,800	10,000	10,000	7,000
Thermal Cond. (BTU-in./Hr. F <sup>2</sup> °F)	50	40	1.47	13	7	4.5	4	13	18	35	35	8
Thermal Expansion (x 10 <sup>-5</sup> /°C)	4.1	4.1	12.4	3.3	N/A	4.8	9.8	3.4	3.9	4.1	4.1	3.3
Dielectric Strength (volts/mil)	N/A	100	450	450	450	400	500	550	450	100	100	400
Volume Resistivity (ohm-cm)	0.00008	10 <sup>6</sup>	10 <sup>13</sup>	10 <sup>15</sup>	10 <sup>14</sup>	10 <sup>14</sup>	10 <sup>14</sup>	10 <sup>14</sup>	10 <sup>10</sup>	10 <sup>8</sup>	10 <sup>10</sup>	10 <sup>10</sup>
Heat Distortion	210°C	210°C	210°C	210°C	75°C	75°C	260°C	300°C	320°C	225°C	200°C	175°C
Elongation (%)	0.2	0.2	5	2	8	3	5	2	2	1.2	1.2	1.5
Thermal Stability (%) (1000 hr. @ 200°C)	0.2	0.2	0.2	0.05	0.5	0.5	0.1	0.1	0.02	0.5	0.5	0.6
Shrinkage (% max.)	0.2	0.8	0.8	0.2	0.8	0.8	0.5	0.2	0.1	0.1	0.2	0.3
Moisture Absorption (% 30 days)	0.2	0.2	0.15	0.1	0.5	0.2	0.1	0.1	0.15	0.2	0.2	0.5
Mix Ratio (by weight)	100/3.4	100/8	100/17	100/8	100/120	100/10	100/80	100/28	100/22	100/9	100/11	N/A
Working Time for 25 gms. (Mins. @ 75°F)	30	30	30	30	90	30	N/A	N/A	N/A	30	30	N/A
Cure (Hr. @ 75 °F)	16-24	16-24	16-24	16-24	16-24	4-16	N/A	N/A	N/A	16-24	16-24	N/A
Cure (Mins. @ 250°F)	7	5	5	5	60	10	4 Hrs.	4 Hrs.	4-6 Hrs.	8	10	30
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*Pre-Measured Kits  
Epoxy-Eez in 10 gm. and 25 gm. units see page 19*