

832 Series Two-part Epoxy Potting Comparison Chart

	832B	832C	832HD	832TC	832HT	832FX	832WC
UNCURED PROPERTIES							
Mix ratio by vol. (A:B)	2:1	2:1	1:1	1:1	1.7:1	1:1	2:1
Viscosity Mixture	3 300 cP	2 700 cP	4 100 cP	18 000 cP	21 900 cP	700 cP	979 cP
Part A	2 200 cP	1 900 cP	5 900 cP	36 000 cP	46 400 cP	800 cP	2 860 cP
Part B	5 800 cP	5 800 cP	2 300 cP	14 000 cP	6 600 cP	165 cP	340 cP
Working time @22 °C	1 h	1 h	45 min	2 h	1 h	2.5 h	1 h
Full cure @22 °C	24 h	24 h	24 h	96 h	24 h	48 h	72 h
Full cure @65 °C	1 h	1 h	2 h	2 h	1 h	2 h	2 h
Full cure @80 °C	30 min	30 min	1 h	1 h	30 min	1 h	1 h
Full cure @100 °C	20 min	20 min	20 min	45 min	15 min	30 min	30 min
CURED PROPERTIES							
Physical Properties							
Color	Black	Translucent	Black	Black	Black	Black	Optically clear
Density	1.11 g/mL	1.12 g/mL	1.07 g/mL	1.83 g/mL	1.10 g/mL	1.08 g/mL	1.06 g/mL
Hardness	80D	84D	80D	82D	87D	88A	82D
Mechanical Properties							
Tensile strength	57 N/mm ²	56 N/mm ²	32 N/mm ²	18 N/mm ²	48 N/mm ²	9.6 N/mm ²	10 N/mm ²
Elongation	3.3%	6.4%	N/A	1.9%	N/A	160%	N/A
Compressive strength	155 N/mm ²	182 N/mm ²	75 N/mm ²	29 N/mm ²	130 N/mm ²	TBD	157 N/mm ²
Flexural strength	114 N/mm ²	38 N/mm ²	TBD	37 N/mm ²	101 N/mm ²	TBD	TBD
Lap shear strength, stainless steel	17 N/mm ²	17 N/mm ²	21 N/mm ²	13 N/mm ²	15 N/mm ²	TBD	3.3 N/mm ²
Izod impact	0.93 kJ/m ²	1.5 kJ/m ²	TBD	1.7 kJ/m ²	TBD	TBD	TBD
Electrical Properties							
Resistivity	5.3 x 10 ¹² Ω·cm	1.2 x 10 ¹⁶ Ω·cm	1.4 x 10 ¹³ Ω·cm	2.6 x 10 ¹⁵ Ω·cm	1 x 10 ¹³ Ω·cm	5.8 x 10 ¹² Ω·cm	1.6 x 10 ¹⁷ Ω·cm
Surface resistivity	TBD	5.5 x 10 ¹⁵ Ω	TBD	3.2 x 10 ¹⁵ Ω	TBD	TBD	TBD
Dielectric strength @1/8"	442 V/mil	406 V/mil	365 V/mil	370 V/mil	>430 V/mil	343 V/mil	394 V/mil
Breakdown voltage @1/8"	55.3 kV	50.7 kV	45.7 kV	46.2 kV	>54 kV	42.8 kV	49 kV
Dielectric constant @1 MHz	2.77	TBD	2.53	4.41	2.83	3.06	3.23
Dielectric dissipation @1 MHz	0.017	TBD	0.041	0.011	0.014	0.050	0.028
Thermal Properties							
Thermal conductivity @25 °C	0.26 W/(m·K)	0.28 W/(m·K)	0.27 W/(m·K)	0.68 W/(m·K)	0.27 W/(m·K)	0.26 W/(m·K)	TBD
Specific heat capacity @25 °C	2.2 J/(g·K)	2.1 J/(g·K)	2.0 J/(g·K)	TBD	1.6 J/(g·K)	2.7 J/(g·K)	TBD
Heat deflection temperature	47 °C	44 °C	TBD	35 °C	54 °C	TBD	TBD
Glass transition temperature (T _g)	49 °C	35 °C	41 °C	25 °C	89 °C	8.8 °C	33 °C
CTE prior T _g	79 ppm/°C	77 ppm/°C	73 ppm/°C	66 ppm/°C	86 ppm/°C	114 ppm/°C	80 ppm/°C
CTE after T _g	196 ppm/°C	195 ppm/°C	207 ppm/°C	167 ppm/°C	152 ppm/°C	218 ppm/°C	192 ppm/°C
Constant service temperature	-40–140 °C	-40–140 °C	-40–150 °C	-30–175 °C	-40–225 °C	-40–140 °C	-40–140 °C
Maximum intermittent temperature	175 °C	175 °C	175 °C	200 °C	250 °C	150 °C	155 °C

Refer to TDS for more information. N/A=Not Available.