Thermally Conductive Adhesive Comparison Chart

	8329TCS	8329TFS	8329TCM	8329TFM	8329TCF	8329TFF
UNCURED PROPERTIES						
Mix ratio by volume	1:1	1:1	1:1	1:1	1:1	1:1
Mixed density	2.27 g/mL	2.11 g/mL	2.47 g/mL	2.19 g/mL	1.73 g/mL	1.94 g/mL
Viscosity	Thixotropic	Dispensable	Thixotropic	Dispensable	Thixotropic	Dispensable
CURED PROPERTIES						
Application Parameters						
Working life	4 h	4 h	45 min	45 min	4 min	4 min
Service cure [a]/Set time [b]	N/A	N/A	5 h [a]	5 h [a]	15 min [b]	15 min [b]
Full cure @22 °C (72 °F)	Heat cure only	Heat cure only	24 h	24 h	4 h	4 h
Full cure @65 °C (149 °F)	2 h	3 h	1 h	2 h	10 min	15 min
Full cure @80 °C (176 °F)	1 h	80 min	45 min	1 h	5 min	10 min
Full cure @100 °C (212 °F)	20 min	30 min	20 min	30 min	N/A	N/A
Thermal Properties						
Constant service temperature	-40 to 150 °C [-40 to 302 °F]	-40 to 150 °C [-40 to 302 °F]	-40 to 150 °C [-40 to 302 °F]	-40 to 150 °C [-40 to 302 °F]	-40 to 150 °C [-40 to 302 °F]	-40 to 150 °C [-40 to 302 °F]
Glass transition temperature (T_g)	8.8 °C [48 °F]	9.1 °C [48 °F]	46 °C [115 °F]	39 °C [103 °F]	23 °C [73 °F]	25 °C [77 °F]
CTE prior T_g	36 ppm/°C [97 ppm/°F]	47 ppm/°C [116 ppm/°F]	71 ppm/°C [160 ppm/°F]	67 ppm/°C [153 ppm/°F]	23 ppm/°C [73 ppm/°F]	34 ppm/°C [94 ppm/°F]
CTE after T_g	173 ppm/°C [344 ppm/°F]	164 ppm/°C [327 ppm/°F]	131 ppm/°C [268 ppm/°F]	125 ppm/°C [257 ppm/°F]	107 ppm/°C [225 ppm/°F]	146 ppm/°C [294 ppm/°F]
Thermal conductivity @25 °C (75 °F)	1.4 W/(m·K)	1.2 W/(m·K)	1.4 W/(m·K)	1.1 W/(m·K)	1.0 W/(m·K)	0.8 W/(m·K)
Thermal diffusivity @25 °C (75 °F)	0.7 mm^2/s	0.6 mm^2/s	0.7 mm^2/s	0.5 mm^2/s	0.4 mm^2/s	0.3 mm^2/s
Specific heat capacity @25 °C (75 °F)	0.9 J/(g·K)	1.0 J/(g·K)	0.9 J/(g·K)	1.1 J/(g·K)	1.3 J/(g·K)	1.4 J/(g·K)
Physical Properties						
Color	Dark grey	Dark grey	Dark grey	Black	Off white	Beige
Hardness	62D	68D	77D	72D	82D	82D
Tensile strength	11 N/mm^2 [1 700 lb/in^2]	4.2 N/mm^2 [600 lb/in^2]	10 N/mm^2 [1 400 lb/in^2]	4.5 N/mm^2 [650 lb/in^2]	13 N/mm^2 [1 900 lb/in^2]	13 N/mm^2 [1 900 lb/in^2]
Compressive strength	43 N/mm^2 [6 200 lb/in^2]	42 N/mm^2 [6 000 lb/in^2]	34 N/mm^2 [4 900 lb/in^2]	44 N/mm^2 [6 400 lb/in^2]	48 N/mm^2 [7 000 lb/in^2]	65 N/mm^2 [9 500 lb/in^2]
Lap shear (stainless steel)	4.7 N/mm^2 [680 lb/in^2]	5.0 N/mm^2 [720 lb/in^2]	6.4 N/mm^2 [930 lb/in^2]	9.0 N/mm^2 [1 300 lb/in^2]	5.0 N/mm^2 [700 lb/in^2]	7.1 N/mm^2 [1 000 lb/in^2]
Lap shear (aluminum)	4.4 N/mm^2 [630 lb/in^2]	6.3 N/mm^2 [910 lb/in^2]	6.1 N/mm^2 [880 lb/in^2]	6.6 N/mm^2 [950 lb/in^2]	8.6 N/mm^2 [1 200 lb/in^2]	8.3 N/mm^2 [1 200 lb/in^2]
Electrical Properties						
Breakdown voltage @3.175 mm	23 900 V	23 300 V	24 300 V	19 500 V	42 700 V	45 900 V
Dielectric strength @3.175 mm	165 V/mil	186 V/mil	195 V/mil	160 V/mil	342 V/mil	367 V/mil
Volume resistivity	2 x 10^{13} Ω·cm	1 x 10^{12} Ω·cm	9 x 10^{12} Ω·cm	9 x 10^{12} Ω·cm	3 x 10^{12} Ω·cm	8 x 10^{12} Ω·cm

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

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