# STABLCOR®

| ST10-EP387-0.009 | | TYPICAL ENGINEERING VALUES | | |
|---|---|---|---|---|
| **Property / Condition** | **Sample Thickness** | **Value (U.S. Units)** | **Value (Metric Units)** | **Test Method** |
| **Mechanical** | | | | |
| **Peel Strength - Standard profile 1 oz. copper** | | | | |
| a. After Thermal Stress (Solder Float) | .254 mm (0.010 in) | 5 lb/inch minimum | 0.9N/mm minimum | IPC-TM-650.2.4.8 |
| b. At 170C (338F) temp. | | 5 lb/inch minimum | 0.9N/mm minimum | IPC-TM-650.2.4.8 / 2.4.8.2 / 2.4.8.3 |
| b. At 125C (257F) temp. | | 5 lb/inch minimum | 0.9N/mm minimum | IPC-TM-650.2.4.8 / 2.4.8.2 / 2.4.8.3 |
| c. After process solutions | | 5 lb/inch minimum | 0.9N/mm minimum | IPC-TM-650.2.4.8 |
| Z - CTE | | | | |
| Below Glass Transition | 0.76 mm (0.030 in) | 46ppm/C | | IPC-TM-650.2.4.24 |
| Above Glass Transition | | 140ppm/C | | IPC-TM-650.2.4.24 |
| Flexural Strength | | | | |
| a. Lengthwise Direction | 0.76 mm (0.030 in) | 120kpsi minimum | 800 N/mm$^2$ minimum | IPC-TM-650-2.4.4 |
| b. Crosswise Direction | | 120kpsi minimum | 800 N/mm$^2$ minimum | IPC-TM-650-2.4.4 |
| **Thermal** | | | | |
| Glass Transition Temperature | | | | |
| by DSC | .254 mm (0.010 in) | 180ºC | | IPC-TM-650.2.4.25c |
| by TMA | .75 mm (0.030 in) | 170ºC | | IPC-TM-650.2.4.25c |
| Decomposition Temperature (Td) at 5% Wt. loss | .75 mm (0.030 in) | 300ºC | | ASTM D3850 |
| Pressure Vessel | .254 mm (0.010 in) | Level 3 | | IPC-TM-650.2.6.16 |
| **Chemical / Physical** | | | | |
| Moisture Absorption | .75 mm (0.030 in) | 0.37% | | IPC-TM-650.2.6.2.1 |
| Chemical Resistance | .254 mm (0.010 in) | 0.05% | | IPC-TM-650.2.3.4.3 |
| Density (g/cc) | | 1.58 | | TBD |
| Flammability | | 94V-0 | | UL94 |
| Outgassing (CVCM<0.1% and TML<=1.0%) | .61 mm (0.024 in) | CVCM=0.02%, TML=0.45% | | ASTM E-595-93 |
| Water Vapor Regain (%WVR) | | 0.19% | | ASTM E-595-93 |
| **Electrical** | | | | |
| Volume Resistivity (UnClad Samples) | | | | |
| After 48hrs Laboratory Conditions | .254 mm (0.010 in) | 4.12E+09 MegOhms-cm | | IPC-TM-650.2.5.17.1 |
| After Temperature/Humidity | | 4.61E+09 MegOhms-cm | | IPC-TM-650.2.5.17.1 |
| Surface Resistivity (UnClad Samples) | | | | |
| After 48hrs Laboratory Conditions | .254 mm (0.010 in) | 5.02E+08 MegOhms | | IPC-TM-650.2.5.17.1 |
| After Temperature/Humidity | | 3.46E+07 MegOhms | | IPC-TM-650.2.5.17.1 |
| Electric Strength | .75 mm (0.030 in) | n/a | | IPC-TM-650.2.5.6.2; ASTM-D-149 |
| Dielectric Breakdown | | n/a | | ASTM-D-299 |
| Permittivity at 1Mhz, maximum | | n/a | | IPC-TM-650.2.5.5.2 |
| Thermal Stress, 10 seconds at 288ºC | | | | |
| A. Unetched | .75 mm (0.030 in) | pass | | IPC-TM-650.2.4.13.1 |
| B. Etched | | pass | | IPC-TM-650.2.4.13.1 |

| STANDARD THICKNESS | STANDARD PANEL SIZE | STANDARD COPPER CLADDING |
|---|---|---|
| **ST10-EP387:** | | |
| 0.009" (0.229mm) | 18" X 24" (457 X 610 mm) | 1/2 OZ. (17uM) Electrodeposited Copper Foil |
| 0.006" (0.153mm), Ask for a Lead Time | | 1.0 OZ. (35uM) Electrodeposited Copper Foil |