TAIYO AMERICA, INC.

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CERTIFICATE OF ANALYSIS and CONFORMANCE

This is to certify that the following product has been inspected prior to sale and shipment, and complies with Taiyo America's manufacturing specifications for this product.

This product meets all the requirements of IPC-SM-840E Classes H and T and Bellcore (Telecordia) GR-78-CORE and is UL recognized 94V-0 (File #E166421, UL Name: PSR-4000BN).

PSR-4000BN Purple DI

Lot # 905 1007 Mfg. Date: 5-10-19 Warranty Ends: 5-10-20

| | | MANUFACTURING | |
|---------------------|--|--|-------------------|
| PROPERTY | TEST METHOD | SPECIFICATION | RESULT |
| VISCOSITY | Toki Sangyo RE100U Viscometer | | |
| | 5 rpms @ 25°C | After mixing: 175 - 225 ps | 220 ps |
| THIXOTROPIC INDEX | Toki Sangyo RE100U Viscometer Viscosity ratio: 5 rpm / 50 rpm | After mixing: 1.2 - 1.6 | 1.3 |
| FINENESS OF GRIND | TAI-0-0002 | 15 microns maximum | 5 microns |
| VISUAL EXAMINATION | Microscopic examination: | | |
| | 1. 1-mil drawdown of wet film | No bubbles, pits, voids, particles, color differences. | Passed V |
| | 2. Wet film drawdown on grind gauge | No bubbles, pits, voids, particles, color differences. | Passed V |
| SCREENABILITY | Visual inspection of screen printed panel | No surface defects, such as bubbles, pinholes, etc. | Passed 🗸 |
| TACK-DRY | Hot air convection oven 80°C / 30 minutes | Tack-free to the touch | Passed |
| IMAGING | ORC HMW 680GW - 7 kW | Stouffer 21 step: 11 - 15 | 13 |
| | 300 mJ/cm ² (Under Artwork) | (clear on copper) | |
| | Horizontal Developer - 1% Na2CO3 30°C (86°F) / 60 secs., 28 psi | | * |
| RESISTANCE TO | 260°C (500°F) / 10 sec x 3 cycles | No discoloration, peeling, | Passed V |
| SOLDERING (*) | Rosin-based flux | or blistering | |
| SOLVENT | Immersion in PM Acetate | No swelling, softening, | Passed |
| RESISTANCE (*) | 20°C / 30 mins. | or blistering | I dissolution [7] |
| PENCIL HARDNESS (*) | TAI-0-0020 | 7H or greater | 914 |
| ADHESION (*) | TAI-0-0021 | 100/100 on copper | Passed [V |

(*) - Final cure for these tests was 60 minutes @ 150°C (302°F) in a convection oven

Verified By:

Q.C. SUPERVISOR 10/9/19

Name Title, Date