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 (HV)** **Lot #** 9082217 **Mfg. Date:** 8-22-19
**Warranty Ends:** 8-22-20

| PROPERTY | TEST METHOD | MANUFACTURING SPECIFICATION | RESULT |
|---|---|---|---|
| VISCOSITY | Toki Sangyo RE100U Viscometer<br>5 rpms @ 25°C | Before mixing: 325 - 375 ps<br>After mixing: 175 - 225 ps | 356 ps<br>203 ps |
| THIXOTROPIC INDEX | Toki Sangyo RE100U Viscometer<br>Viscosity ratio: 5 rpm / 50 rpm | After mixing: 1.2 - 1.6 | 1.4 |
| 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 ☑ |
| | 2. Wet film drawdown on grind gauge | No bubbles, pits, voids, particles, color differences. | Passed ☑ |
| SCREENABILITY | Visual inspection of screen printed panel | No surface defects, such as bubbles, pinholes, etc. | Passed ☑ |
| TACK-DRY | Hot air convection oven<br>80°C / 30 minutes | Tack-free to the touch | Passed ☑ |
| IMAGING | ORC HMW 680GW - 7 kW<br>500 mJ / $cm^2$<br>Horizontal Developer - 1% Na2CO3<br>30°C (86°F) / 60 secs., 28 psi | Stouffer 21 step: 9 - 13<br>(clear on copper) | 11 |
| RESISTANCE TO SOLDERING (*) | 260°C (500°F) / 10 sec x 3 cycles<br>Rosin-based flux | No discoloration, peeling, or blistering | Passed ☑ |
| SOLVENT RESISTANCE (*) | Immersion in PM Acetate<br>20°C / 30 mins. | No swelling, softening, or blistering | Passed ☑ |
| PENCIL HARDNESS (*) | TAI-0-0020 | 7H or greater | 9H |
| ADHESION (*) | TAI-0-0021 | 100/100 on copper | Passed ☑ |

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

**Verified By:**

Q.C. Supervisor 8/23/19

**Name, Title, Date**