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.

PSR-4000 LDI EU

Lot# 0070817

Mfg. Date: 7-08-20 Warranty Ends: 1-08-21

MANUFACTURING

| | | MANUFACTURING | | |
|---------------------|--|--|--------|------------|
| PROPERTY | TEST METHOD | SPECIFICATION | RES | <u>ULT</u> |
| VISCOSITY | Toki Sangyo RE100U Viscometer | Before mixing: Report Only | 420 | ps |
| | 5 rpms @ 25°C | After mixing: 180 - 220 ps | 203 | ps |
| THIXOTROPIC INDEX | Toki Sangyo RE100U Viscometer Viscosity ratio: 5 rpm / 50 rpm | After mixing: Report Only | 1.3 | * |
| FINENESS OF GRIND | TAI-0-0002 | 5 microns maximum | 5 | microns |
| VISUAL EXAMINATION | Microscopic examination: | | | |
| √° | 1. 1-mil drawdown of wet film | No bubbles, pits, voids, particles, color differences. | Passed | d v |
| | 2. Wet film drawdown on grind gauge | No bubbles, pits, voids, particles, color differences. | Passed | d 🗸 |
| SCREENABILITY | Visual inspection of screen printed panel | No surface defects, such as bubbles, pinholes, etc. | Passed | d 🗹 |
| TACK-DRY | Hot air convection oven 80°C / 30 minutes | Tack-free to the touch | Passe | d 🗹 |
| IMAGING | ORC HMW 680GW - 7 kW 150 mJ / cm ² | Stouffer 21 step: 12 - 16 (clear on copper) | 12 | i ili |
| | Horizontal Developer - 1% Na2CO3 30°C (86°F) / 60 secs., 28 psi | | | |
| RESISTANCE TO | 260°C (500°F) / 30 sec x 1 cycle | No discoloration, peeling, | Passe | d V |
| SOLDERING (*) | Rosin-based flux | or blistering | | |
| SOLVENT | Immersion in PM Acetate | No swelling, softening, | Passe | d 🖂 |
| RESISTANCE (*) | 20°C / 30 mins. | or blistering | 0 1 | <i>1</i> |
| PENCIL HARDNESS (*) | TAI-0-0020 | 6H or greater | 81 | J |
| ADHESION (*) | TAI-0-0021 | 100/100 on copper | Passe | d 😈 |

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

Verified By:

1. O.C. SUPERVISOR 7/9/20

Name, Title, Date