CERTIFICATION
FP-923
BATCH \# 21123

| PRODUCT | DESCRIPTION | TYPE | METHOD | SENSITIVITY | FORM | CLASS | APPROVAL <br> DATE |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| FP-923 | Fluorescent Penetrant | I | A \& C | 3 | N/A | N/A | 1-Feb-2022 |

We hereby certify that this batch of inspection material when tested following manufacture meets the following:
Certificamos que este lote de material de inspeccion cumple con los siguientes requisitos cuando es probado despues de la fabricación:

- SAE AMS-2644H and on the Qualifed Products List (test reference: AFWRL/MLS 86-88, AFRL/MLS 01-123).
- ISO/FDIS 3452
- Safran IN-5000c
- Boeing BSS 7039 \& BAC 20-20-02
- Rolls-Royce RPS-702-7, CSS-232, RRP 58003C
- General Electric Aircraft Engines 70-32-02 \& Gas Turbines LM6000 PC
- NAVSEA 250-1500-1 I 12.5.1.1.1, Rev 18 \& T9074-AS-G1B-010/271 Rev. 12014
- AMS 2647G, ASTM E1209-18, ASTM E165/E165M-18, ASTM E1417/E1417M-21
- Pratt \& Whitney FPM PMC \#4360-7 Rev AE, and FPM code 9, change G dated 20 July 2020
- ASME Boiler \& Pressure Vessel Code 2019 Section V, Article 6, appendix II-I-641\& II-J-642
- 10CFR part 21 applies

PO\# $\qquad$

- Shelf life is 5 years from date of batch approval.

Vida útil de garantia son 5 años desde la fecha del "approval date".

- Batch number is on bulk labels or bottom of aerosol cans.

Numeros de lote se encuentran en las etiquetas de los botes a granel o en el fondo de los botes de aerosol.
Is free of all known Ozone depleting substances and mercury contamination and was not made in any mercury bearing equipment. Does not contain polychlorinated biphenyl (PCB), nonylphenol ethoxylates (NPE), or RoHS banned substances.
Esta libre de todas sustancias degradantes del ozono, de contaminación de mercurio, y no fue fabricado usando equipo conteniendo mercurio. No contiene polychlorinated biphenyl (PCB), nonylphenol ethoxylates (NPE), o RoHS sustancias prohibidas.

| QUALITY ASSURANCE TESTS | REQUIREMENTS | BATCH <br> RESULTS |
| :---: | :---: | :---: |
| Appearance: PMC 4360-7 | PMC 4360: Clear, no haze, sediment or layering. | Pass |
| Density: | MLC: $879 \mathrm{~g} / \mathrm{L}-929 \mathrm{~g} / \mathrm{L}$ @ $21.1^{\circ} \mathrm{C}\left(70^{\circ} \mathrm{F}\right)$ | $926 \mathrm{~g} / \mathrm{L}$ |
| Flash Point: ASTM D-93: AMS-2644 \| 3.3.3, PMC 4360-7 | PMC 4360-7: $>93.3{ }^{\circ} \mathrm{C}\left(>200{ }^{\circ} \mathrm{F}\right)$ | $203{ }^{\circ} \mathrm{F}$ |
| Viscosity: ASTM D-445, AMS-2644 \| 3 3.3.4, PMC 4360-7 | PMC 4360-7: 9.3-12.6 mm ${ }^{2} / \mathrm{s}$ @ $37.7^{\circ} \mathrm{C}\left(100^{\circ} \mathrm{F}\right)$ | $11.1 \mathrm{~mm}^{2} / \mathrm{s}$ |
| Fluorescent Brightness: ASTM E-1135-19; AMS-2644 ¢ 3.3.8.3.3 | AMS 2644: $\geq 90 \%$ of level 4 std. FP-4PE | $94 \%$ |
| Water Tolerance AMS-2644 ¢ 3.3.8.4, IISO 3452-2:2006(E) ¢ 7.10 | AMS 2644: $\geq 5$ \% | 15.3 \% |
| Removability: AMS-2644 ¢ 3.3.8.6 | MLC: Equal to MLC Level 3 Standard | Pass |
| Water Content, ASTM E-1417/E1417M-21 annex A1 (Karl Fischer) ; or MCL Q-33 | PMC 4360-7: < 1 \% | 0.1 \% |
| Sulfur Content: per ASTM E-165/E165M-18 \| 9.1.2 Annex A4 | ISO 3452: $\leq 200 \mathrm{ppm}$ (0.02 \%); PMC 4360: $<1000 \mathrm{ppm}$ ( 0.1\%) | <200 ppm |
| Chloride Content: ASTM E-165/E165M-18 ¢ 9.1.2 Annex A4 | ISO 3452:- $\leq 200 \mathrm{ppm}$ (0.02\%); PMC 4360: < 400 ppm (0.04\%) | $<200 \mathrm{ppm}$ |
| Fluoride Content: ASTM E-165/E165M-18 ¢ 9.1.2 Annex A4 | PMC 4360: $\leq 50 \mathrm{ppm}$ (0.005 \%) | $<50 \mathrm{ppm}$ |
| Total Halogen Content: ASTM E-165/E165M-18 \| 9.1.2 Annex A4 | ISO 3452: $\leq 200 \mathrm{ppm}(0.02 \%)$ | <200 ppm |
| Sodium Content: ASTM E-165/E165M-18 ¢ 9.1.2 Annex A4, MCL M-504 | PMC 4360:- $\leq 100 \mathrm{ppm}$ (0.01 \%) | $<100 \mathrm{ppm}$ |

## BATCH TESTED BY:



DENNIS MASON
QC CHEMIST

## BATCH APPROVED BY:



JUSTINE FORD
PLANT CHEMIST

