



**CERTIFICATION**  
**E-58D**  
**BATCH # 22964**

| PRODUCT | DESCRIPTION            | TYPE | METHOD | SENSITIVITY | FORM | CLASS | APPROVAL DATE |
|---------|------------------------|------|--------|-------------|------|-------|---------------|
| E-58D   | Hydrophilic Emulsifier | 1    | D      | N/A         | N/A  | N/A   | 11-Apr-2022   |

We hereby certify that this batch of inspection material when tested following manufacture meets the following:

*Certificamos que este lote de material de inspección cumple con los siguientes requisitos cuando es probado después de la fabricación:*

- SAE AMS 2644H and on the Qualified Products List (test reference: AFWAL/MLS 86-88 & AFRL/MLS 98-165)
- ISO/FDIS 3452
- Boeing BSS 7039 & BAC 20-20-02
- Pratt & Whitney FPM PMC # 4355-7 Rev. AK
- Safran In-5000c; Snecma sensibilité S3 & S4
- Rolls-Royce RPS-702-7; CSS 232; OMat # 621B, RRP 58003C
- AMS 2647-F, ASTM E-165/E165-18 & ASTM E-1417/E1417M-21
- General Electric Gas Turbines LM6000 PC & Aircraft Engines 70-32-02
- ASME Boiler & Pressure Vessel Code 2019, Section V, Article 6, appendix II-J-641 & II-J-642
- 10 CFR part 21 applies.

PO# \_\_\_\_\_

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

*Vida útil de garantía 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 RESULTS           |
|-------------------------------------------------------------------|-------------------------------------------------------------|-------------------------|
| Appearance:                                                       | MLC: Clear, light red liquid, no sediment.                  | Pass                    |
| Density:                                                          | MLC: 975.6 g/L - 1192.4 g/L @ 21.1°C (70°F)                 | 1047.2 g/L              |
| Flash Point: ASTM D-93, AMS-2644 ¶ 3.3.3                          | MLW: ≥ 93.3 °C (≥ 200 °F)                                   | 248 °F                  |
| Viscosity: ASTM D-445; AMS-2644 ¶ 3.3.4, PMC 4355-7               | PMC 4355-7: 17.9 - 24.2 mm <sup>2</sup> /s @ 37.7°C (100°F) | 21.0 mm <sup>2</sup> /s |
| Water Content, ASTM E-1417/E1417M-21 annex A1 (Karl Fischer)      | AMS-2644 & PMC 4355-7: ≤ 5%                                 | 2.7 %                   |
| Refractive Index of 20% conc. measured with AF-15                 | MLC: 13.8 - 15.2 Brix scale                                 | 14.3                    |
| Sulfur Content: per ASTM E-165/E165M-18 ¶ 9.1.2 Annex 4           | ISO 3452: ≤ 200 ppm (0.02 %), PMC 4355-7: <1000 ppm ( 0.1%) | <200 ppm                |
| Chloride Content: ASTM E-165/E165M-18 ¶ 9.1.2 - Annex 4           | ISO 3452: ≤ 200 ppm (0.02 %), PMC 4355-7: < 400 ppm (0.04%) | <200 ppm                |
| Fluoride Content: ASTM E-165/E165M-18 ¶ 9.1.2 - Annex 4           | PMC 4355-7: ≤ 50 ppm (0.005 %)                              | <50 ppm                 |
| Total Halogen Content: ASTM E-165/E165M-18 ¶ 9.1.2 - Annex 4      | ISO 3452: ≤ 200 ppm (0.02 %)                                | <200 ppm                |
| Sodium Content: ASTM E-165/E165M-18 ¶ 9.1.2 - Annex 4 & MCL M-504 | PMC 4355-7: ≤ 100 ppm (0.01 %)                              | <100 ppm                |

**MET-L-CHEK QUALITY ASSURANCE**

**BATCH TESTED BY:**

**DENNIS MASON**  
QC CHEMIST

**BATCH APPROVED BY:**

**JUSTINE FORD**  
PLANT CHEMIST



Met-L-Chek Company, 2910 Harvard Avenue | Cleveland, OH 44105

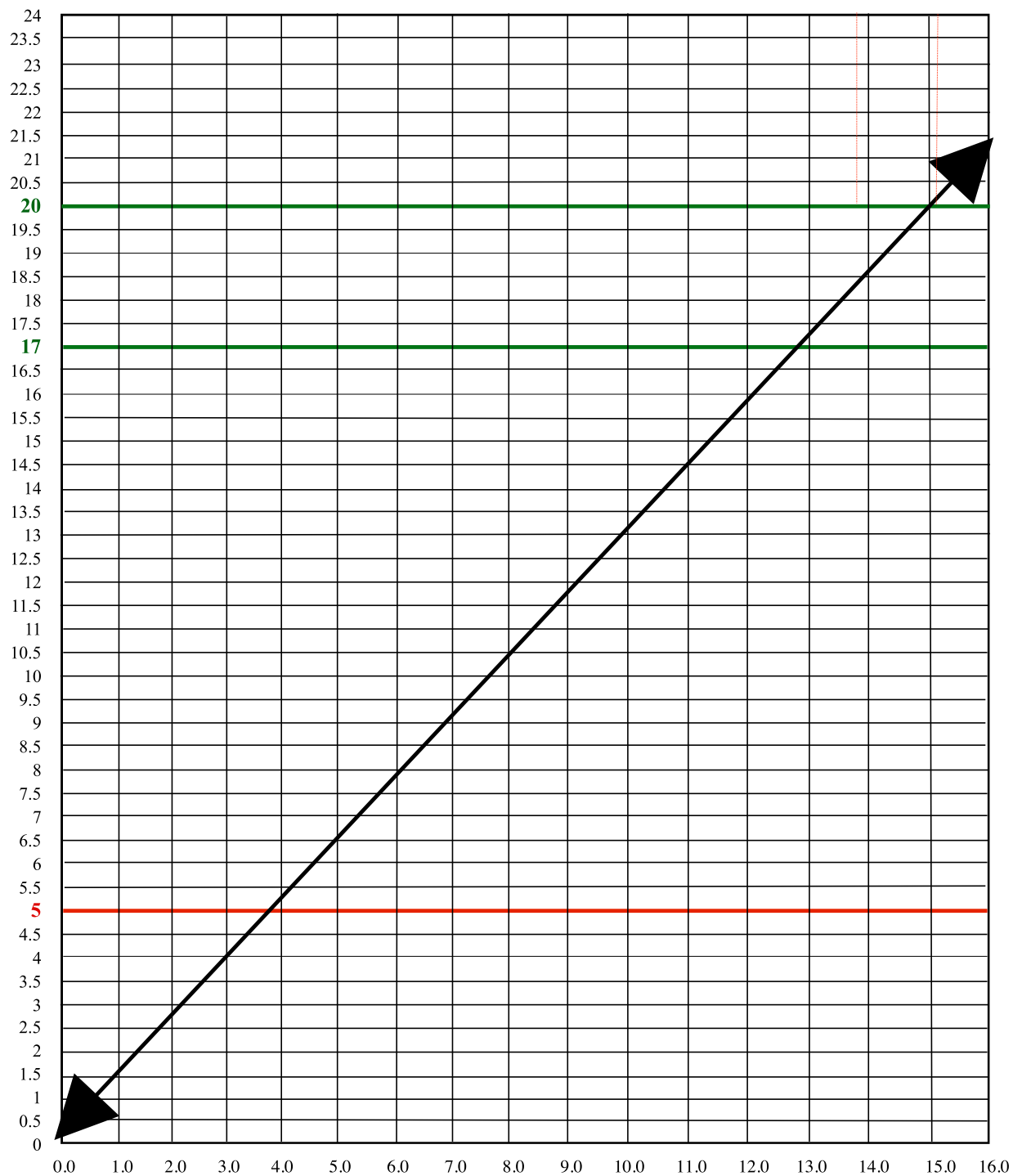
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**E-58D**  
**CONCENTRATION CHART**

**% CONCENTRATION**



**Brix Refractive Index Reading**  
**Based on refractometer models Af-15**