Inspection Certificate

MANUFACTURE DATE: **09/02/2019**

Abnahmeprufzeugnis DIN EN 10204 3.1
Certificat De reception
Certificado di collaudo
Keuringsrapport

SUBJECT: **Zyglo ZL-15B Water Washable Fluorescent Penetrant** **BATCH No:** **1902146**
B.B.E.: **FEB 2024**

We hereby certify that when tested at the time of manufacture, the above material:

1. Meets the requirements of and has been tested for sulfur and halogens according to:
   a) ASME Boiler and pressure Vessel Code, 2004, 2007, 2010, 2013, 2015 & 2017 Edition, Section V, including 2005, 2006, 2008,2009 & 2011a Addendum, Nondestructive Examination, Article 6 Paragraph T-641 & Article 24 as applicable.Anion analysis by ASTM D129 decomposition followed by Ion Chromatography method Annex A4.
   b) ASTM E-165/E-165M-18, Paragraph 7.1.
   c) MIL-STD-271F(SH), 27 June 86, Paragraph 5.3 and 5.3.1 including notice 1 Paragraph 5.6.1 (21 June 1993).
   d) MIL-STD-2132D, 11 February 2003, Paragraph 7.1, 7.1.2, 7.1.3 and Appendix C, Paragraph 40.

   Test results obtained were as follows:

   Sulfur: **0.0006** wt % of residue. **Chlorine + Fluorine:** **0.0036** wt % of residue.

   Cleaner residue (See note 3) g/100g g/100ml

2. Meets the requirements of AMS 2644F and ASTM E 1417/E 1417M-16 Paragraph5.1& 6.5.1. Penetrant brightness tested according to ASTM E 1135.

   When tested according to paragraph 4.2.2 & 4.3.2 of AMS 2644F the following results were obtained:

   4.2.2.1 **Penetrant Tests**

Flashpoint (PMCC) (3.3.3)	:	103 °C
Viscosity (3.3.4)	:	5.3 mm^2/s (cS) @ 38°C
Fluorescent Brightness (3.3.8.3.2)	:	59 % of Standard (AMS FP-4PE)
Water tolerance Method A only (3.3.8.5)	:	9 %
Penetrant Removability (3.3.8.6)	:	Conforms

   4.2.2.2 **Emulsifier Tests**

Flashpoint (PMCC) (3.3.3)	:	N/A
Viscosity (3.3.4)	:	N/A
Water Content Method D only (3.3.9.6)	:	N/A

   4.2.2.3 **Developer Tests**

Developer Fluorescence (3.3.10.2)	:	N/A
Developer Removability (3.3.10.4)	:	N/A
Redispersibility (3.3.10.5)	:	N/A

   3.3.11.5 **Solvent Remover Tests**

Penetrant Removal (4.4.11.2)	:	N/A

3. We further certify that the material does not contain mercury as a basic element and no mercury bearing equipment was used in its manufacture.

   Certification is issued under the auspices of the Quality Assurance Manager.

(Authorised Employee)

For and on behalf of MAGNAFLUX (A DIVISION OF ITW LTD)

Notes:

1. Our batch number appears on the label of bulk containers. Aerosols have batch numbers printed on bottom of the container. Bulk materials have a minimum shelf life of 5 years from date of manufacture. Aerosols have a minimum shelf life of 3 years from date of manufacture.
2. Most specifications require test results stated in percent, but some require parts per million (ppm). To convert "percent" figures to "parts per million" move the decimal four places to the right.
3. MIL-STD-271, MIL-STD-2132 and ASME Sec V, all require that materials be subject to a procedure to evaporate off volatile solvents before analysis for Sulfur and Halogens. According to these specifications, only those residues higher than 0.005 g/100ml shall be analysed for Sulfur and Halogens. Lower residues shall be reported.
4. The above certification gives the results obtained at the time of manufacture. Age and use may alter the properties of any material.

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