Inspection Certificate

Abnahmeprüfungszeugnis DIN EN 10204.3.1
Certificat De reception
Certificado di collaudo
Keuringsrapport

Batch Number	**2310017**	**Product Name**	Zyglo ZL-67 Fluorescent Penetrant
Date of Manufacture	05/10/2023	**B.B.E.**	10/2028

Specification: Specification

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, 2023 Edition, Section V, Non-destructive Examination.

b) Anion analysis by ASTM D129 decomposition followed by Ion Chromatography method Annex A4.

c) ASTM E-165/E-165M-18, Paragraph 7.1.

d) MIL-STD-2132E, March 29, 2016, Paragraph 6.1.3.

e) ISO 3452-2

2. Meets the requirements of AMS 2644H and ASTM E 1417/E 1417M-21 Paragraph 5.1& 6.5.1.

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.

Test	Section	Limit	Result
Specification			Passed

Specification: Ion Test Results

Test results obtained were as follows:

Test	Section	Limit	Result
Sulphur Content			6 ppm
Halogen Content			53 ppm

Specification: AMS 2644H Penetrant Test Results

Type 1 Level 3 Method A & C Penetrant

When tested according to paragraph 4.3.2 section 4.2.2.1 of AMS 2644H the following results were obtained:

Test	Section	Limit	Result
Flashpoint (SMT 14)	3.3.3		127.5°C
Viscosity	3.3.4		19.63 mm2/s (cSt)
AMS 2644 Brightness	3.3.8.3.2		125.31%
Water Tolerance (SMT 2)	3.3.8.5		26.26 %
Penetrant Removal	3.3.8.6		Passed
Water Content (SMT 18)	3.3.8.7		0.33%

Specification: EN ISO 3452-2

Type I Level 3 Method A Penetrant

When tested at the time of manufacture the following results were obtained:

Test	Section	Limit	Result
Appearance	6.1 EN ISO 3452-2	Equal to standard	Passed
Sensitivity for ISO 3452-2 (SMT 58)	6.2 in EN ISO 3452-2	Equal to Level 3 reference system	Passed
Viscosity	6.4 in EN ISO 3452-2	±10% Nominal Value	19.63 mm2/s (cSt)
Flashpoint (SMT 14)	6.5 in EN ISO 3452-2	Nominal 100°C (Limits 98°C Minimum)	127.5°C
Washability (SMT 47)	6.6 in EN ISO 3452-2	Equal to standard	Passed

ISO-3452 Brightness	6.7 in EN ISO 3452-2	± 10 % of Type Test Sample (Limit not less than 90%)	116.87 %
Corrosive Properties	6.11 EN ISO 3452-2	No Corrosion on Magnesium Alloy	Passed
Halogen Content	6.12 EN ISO 3452-2	<200ppm	53 ppm
Sulphur Content	6.12 EN ISO 3452-2	<200ppm	6 ppm
Water Content (SMT 18)	6.20 in EN ISO 3452-2	<5%	0.33%
Density (SMT 50)	6.3 in EN ISO 3452-2	0.935 – 0.973 g/cm3@ 20°C	0.950 g/cm3

Specification: Pratt and Whitney Test Results
VENDOR'S REPORT – TEST RESULTS

Please forward in duplicate to:
Reports, Materials Control Laboratory
Pratt & Whitney
(Plant to which material is shipped)

This is to certify that Paragraph Numbers(s) 1 & 5 apply to the shipment below:

1. Applicable to all raw material, to parts, made from raw material furnished or purchased by vendor, or to assemblies of which some or all components are made from raw material furnished or purchased by vendor.) Material, parts, or components of assemblies have been inspected and accepted to the specifications involved, and results of tests required by Pratt & Whitney Aircraft are shown herein.
2. (Applicable to parts or assembly components made from raw material furnished by Pratt & Whitney Aircraft and not chemically or metallurgically treated by vendor so as to change surface or internal condition significantly.) Parts or assemblies have been machined or formed from material furnished by Pratt & Whitney Aircraft, to make these parts or components of assemblies.
3. (Applicable to parts or assembly components made from raw material furnished by Pratt & Whitney Aircraft and chemically or metallurgically treated by vendor so as to change surface or internal condition significantly.) Parts of components of assemblies have been made from raw material furnished by Pratt & Whitey Aircraft to make these parts or components of assemblies. Parts, components of assemblies have been inspected and accepted to the specifications involved, and results of tests required by Pratt & Whitney Aircraft are as show herein.
4. (Applicable to repaired or reworked raw material, parts or assemblies.) The raw materials, parts or assemblies have been reworked or repaired in accordance with Pratt & Whitney Aircraft Instructions, and are the same material, parts or assemblies returned for such reworking or repair, except for replacement of assembly components, in which case paragraphs 1 and 5 are also applicable.
5. (Applicable to all assemblies, and to parts when specifically authorized by purchaser.) Results of all chemical and physical tests not shown below, as well as all other evidence which shows acceptability of raw materials and assembly components, are on file and available for inspection at any reasonable time.

Part or Assay No: PMC 4360-10
CHG. LTR.
SUF No.
Specifications, As Ordered: PWA 300 RV. BP
Quantity:
Date Shipped:
Location of PWA Plant to Shipped to:
Pack Slip No.:
Heat, Lot, Code or Batch No: See above
Raw Material Vendor:
Type-Compound or Casting: ZL-67 Penetrant
PWA Heat Codes (if required)

If materials, parts or assemblies do not entirely conform to specification requirements, the deviation and authority for furnishing such materials are indicated below:

Magnaflux certifies that ZL-67 meets the requirements of PMC 4360-10.

Test	Section	Limit	Result
Flashpoint (SMT 14)		>93°C	127.5°C
Kinematic Viscosity (SMT 17)		18.72 - 22.88 mm2/s (cSt)	19.63 mm2/s (cSt)
Water Content (SMT 18)		<1%	0.33%
Fluorescent Brightness		>90%	125.31%
Separation of Constituents - Homogenous		None	Passed
Fluoride Content		≤ 50 ppm	< 1 ppm

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Chloride Content		≤ 400 ppm	53 ppm
Sulphur Content		<1000ppm	6 ppm
Sodium (SMT 44)		≤ 0.010 %	0.0010%

--- EOR ---

Prepared by **Approved by**

Notes:
1. Our batch number appears on the label of bulk containers. Aerosols have batch numbers printed on bottom of the container.
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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