

**Inspection Certificate**

Abnahmeprüfungszeugnis DIN EN 10204.3.1

Certificat De reception

Certificado di collaudo

Keuringsrapport



<b>Batch Number</b>	<b>2308044</b>	<b>Product Name</b>	ZL-440 Fluorescent Penetrant
<b>Date of Manufacture</b>	31/08/2023	<b>B.B.E.</b>	08/2028

**Specification: Ion Testing Results**

Test results obtained were as follows:

Test	Section	Limit	Result
Sulphur Content			13 ppm
Halogen Content			51 ppm

**Specification: AMS 2644H Penetrant Test Results**

When sampled and 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 54)	3.3.3		No flash
Viscosity	3.3.4		14.53 mm <sup>2</sup> /s
Fluorescent Brightness	3.3.8.3.2		100.92 %
Penetrant Removal	3.3.8.5		Passed
Water Content (SMT 18)	3.3.8.7		48.99 %

**Specification: EN ISO 3452-2**

When tested at the time of manufacture the following results were obtained. The information is derived from our quality checks. It does not relieve the purchaser from examining the product upon delivery and gives no assurance of the product for any particular purpose.

Test	Section	Limit	Result
Appearance	6.1 in 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 2 reference system	Passed
Density (SMT 50)	6.3 in EN ISO 3452-2	0.950 – 1.050 g/cm <sup>3</sup> @ 20°C	1.000 g/cm <sup>3</sup>
Viscosity	6.4 in EN ISO 3452-2	13.00 – 16.00 mm <sup>2</sup> /s @ 38°C	14.53 mm <sup>2</sup> /s
Flashpoint (SMT 54)	6.5 in EN ISO 3452-2	93°C Min for Bulk	No flash
Fluorescent Brightness	6.7 in EN ISO 3452-2	82.4 – 102.4%	100.92 %
Washability (SMT 47)	6.6 in EN ISO 3452-2	Equal to standard	Passed
Corrosive Properties	6.11 EN ISO 3452-2	No Corrosion on Aluminum Alloy	Passed
Sulphur Content	6.12 EN ISO 3452-2	< 200 ppm	13 ppm
Halogen Content	6.12 EN ISO 3452-2	<200 ppm	51 ppm

**Specification**

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

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

d) NAVSEA T9074-AS-GIB-010/271, September 11, 2014, Paragraph 5.3.1 & 5.6.2

2. It is hereby certified that the above listed inspection material and batch number meets the requirements of AMS 2644H and is approved by the U.S. Air Force and listed on the QPL-AMS-2644.

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.

4. It is further certified that this material meets the requirements of ASTM E1417/E1417M-21, Paragraph 5.1

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**Prepared by**

A handwritten signature in black ink, appearing to be 'D. J. ...'.

**Approved by**

A handwritten signature in black ink, appearing to be 'J. K. ...'.

**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.