

Inspection Certificate

Abnahmeprüfungszeugnis DIN EN 10204.3.1
 Certificat De reception
 Certificado di collaudo
 Keuringsrapport



| | | | |
|----------------------------|----------------|---------------------|------------------------------|
| Batch Number | 2403014 | Product Name | ZL-425 Fluorescent Penetrant |
| Date of Manufacture | 13/03/2024 | B.B.E. | 03/2029 |

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) 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.
- e) EN ISO 3452-2

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 EN ISO 3452-2 (Sensitivity level 1) and ASTM E1417/E1417M-21, Paragraph 5.1

| Test | Section | Limit | Result |
|---------------|---------|-------|--------|
| Specification | | | Passed |

Specification: Ion Testing Results

Test results obtained were as follows:

| Test | Section | Limit | Result |
|-----------------|---------|-------|--------|
| Sulphur Content | | | 8 ppm |
| Halogen Content | | | 24 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 14) | 3.3.3 | | No flash |
| Viscosity | 3.3.4 | | 14.51 mm ² /s |
| Fluorescent Brightness | 3.3.8.3.2 | | 79.62 % |
| Penetrant Removal | 3.3.8.6 | | Passed |
| Water Content (SMT 18) | 3.3.8.7 | | 53.25 % |

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 EN ISO 3452-2 | Equal to standard | Passed |
| Sensitivity for ISO 3452-2 (SMT 58) | 6.2 in EN ISO 3452-2 | Level 1 | Passed |
| Density (SMT 50) | 6.3 in EN ISO 3452-2 | 0.995 – 1.020 g/cm ³ @ 20°C | 1.000 g/cm ³ |
| Viscosity | 6.4 in EN ISO 3452-2 | 13.05 – 15.95 mm ² /s @ 38°C | 14.51 mm ² /s |
| Flashpoint (SMT 14) | 6.5 in EN ISO 3452-2 | 93°C Min for Bulk | No flash |

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|------------------------|----------------------|----------------------------------|----------|
| Fluorescent Brightness | 6.7 in EN ISO 3452-2 | 100 % ± 10 % of Type Test Sample | 104.45 % |
| Washability (SMT 47) | 6.6 in EN ISO 3452-2 | Equal to standard | Passed |
| Sulphur Content | 6.12 EN ISO 3452-2 | <200ppm | 8 ppm |
| Halogen Content | 6.12 EN ISO 3452-2 | <200ppm | 24 ppm |
| Corrosive Properties | 6.11 EN ISO 3452-2 | No Corrosion on Aluminum Alloy | Passed |

--- 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.