



Penetrant Professor Approved

Product Data Sheet

FP-95A(M)

Fluorescent Penetrant

1  
112015



Met-L-Chek Company manufactures a complete line of penetrants used in the fluorescent (Type 1) and visible (Type 2) dye penetrant inspection process. All Met-L-Chek Company penetrants are qualified to AMS-2644 and are sold under the Met-L-Chek® and Pen-Chek® trademarks. Met-L-Chek Company products are manufactured under license in The Netherlands by NDT Europa.

FP-95A(M) is approved to AMS-2644 as a fluorescent (Type 1); Methods “B”, “C”, and “D”; sensitivity level 3 post emulsifiable inspection penetrant. It is approved with Method “B” emulsifier E-57 and Method “D” emulsifier E-58D. For Method “C” applications it is used with E-59, E-59A, R-503, and R-504. FP-95A(M) is applied by immersion, spray, or wipe on. FP-95A(M) meets requirements for high sensitivity aerospace applications.

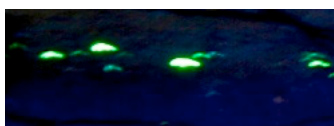
FP-95A(M) is listed on the Qualified Products List for AMS-2644. It meets the requirements of AMS-2647, ASME Boiler and Pressure Vessel Code Section V, ASTM E-165, and ASTM E-1417, for penetrant inspection materials. It is low in sulfur and halogens and is safe for use on all metal surfaces.

Guide to METHOD “B” (lipophilic) processing per ASTM E-1417

Guide to METHOD “D” (hydrophilic) processing per ASTM E-1417

- 1. Part must be clean, dry and at a temperature of 4.4°-52°C (40°-125°F) before penetrant is applied.
2. Apply FP-95A(M) using spray, immersion, or wipe on.
3. Wait a minimum of 10 minutes; 20 minutes if temperature is 4.4°-10°C (40-50°F).
4. Immerse part in and out of E-57 emulsifier, or flow on emulsifier; drain time < 3 minutes.
5. Wash part; water temperature 10°-38°C (50°-100 °F). Water pressure < 275kPa (< 40 psi); if a hydro-air nozzle is used limit pressure to < 172kPa (<25 psi). Distance >30cm (>12 inches). Wash time- only long enough to remove surface fluorescence under UV-A .
6\*. Dry part; temperature not to exceed 71°C (160°F), time - only long enough to dry surface.
7. Apply dry powder developer, form “a” (D-72A), by dusting, or non aqueous developer, form “d”(D-70), by spraying.
7A\*. If water based developers forms “b “(D-76B) or “c”(D-78B) are used they are applied by immersion or spray, prior to step 6 drying.
8. Wait a minimum of 10 minutes before inspection. Maximum time is 1 hour for form “d ” (non aqueous), maximum 2 hours for forms “b & c” (aqueous), and maximum 4 hours for form “a” (dry powder). If times are exceeded, clean part and reprocess.
9.Use UV-A illumination of >1000 μw/cm² @ 15inches (38.1 cm) in a darkened area of <21 lux visible light (<2 foot candles).

- 1. Part must be clean, dry and at a temperature of 4.4°-52°C (40°-125°F) before penetrant is applied.
2. Apply FP-95A(M) penetrant using spray, immersion, or wipe on
3. Wait a minimum of 10 minutes; 20 minutes if temperature is 4.4°-10°C (40-50°F).
4. Pre-rinse part with water. Water temperature 10°-38°C (50°-100 °F). Water pressure < 275kPa (< 40 psi);only long enough to remove bulk of surface penetrant. This step may be skipped when emulsifier is applied by spray.
5. Immerse part in gently agitated E-58D emulsifier diluted to 17-20%. for 30 seconds to 2 minutes depending upon part roughness For spray applications emulsifier concentration should be 1-5% and spray contact for less than 2 minutes.
6. Wash part; water temperature 10°-38°C (50°-100 °F). Water pressure < 275kPa (< 40 psi); if a hydro-air nozzle is used limit pressure to < 172kPa (<25 psi). Distance >30cm (>12 inches). Wash time- only long enough to remove surface fluorescence under UV-A .
7\*. Dry part; temperature not to exceed 71°C (160°F), time - only long enough to dry surface.
8. Apply dry powder developer, form “a” (D-72A), by dusting, or non aqueous developer, form “d”(D-70), by spraying.
8A\*. If water based developers forms “b” (D-76B) or “c”(D-78B) are used they are applied by immersion or spray, prior to step 6 drying.
9. Wait a minimum of 10 minutes before inspection. Maximum time is 1 hour for form “d ” (non aqueous), maximum 2 hours for forms “b & c” (aqueous), and maximum 4 hours for form “a” (dry powder). If times are exceeded, clean part and reprocess.
10.Use UV-A illumination of >1000 μw/cm² @ 15inches (38.1 cm) in a darkened area of <21 lux visible light (<2 foot candles).



Fluorescent Penetrant Indications Type 1 (FP-95A(M), Method D (E-58D), Level 3, form “a”(D-72A).



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# FP-95A(M)

## Fluorescent Penetrant

### Typical Physical Properties

Form: yellow green liquid  
 Density: 932 g/L  
 Flash Point: > 93°C (> 200°F)  
 Viscosity 6.9 mm<sup>2</sup>/s  
 Fluorescent Brightness: (AMS-2644 requirement > 90%): 95.3 %  
 Corrosion of aluminum: none  
 Corrosion of carbon steel: none  
 Corrosion of magnesium: none  
 Corrosion of stainless steel: none  
 Corrosion of titanium: none  
 Chloride content: < 100 ppm (0.01%)  
 Fluoride content: < 50 ppm (0.005%)  
 Sodium content: < 100 ppm (0.01%)  
 Sulfur content: < 100 ppm (0.01%)  
 Mercury: none  
 VOC's: 0 g/L  
 Ozone layer depleting substances: none  
 PCB's: none

### Product Availability

12 x 400m1(16oz) aerosols  
 1 gallon (3.7L) metal can  
 5 gallon (18.9L) metal pail  
 55 gallon (208L) metal drum

#### NSN #

1 gallon	6850-01-117-2971
1 gallon	6850-01-263-9774
1 gallon	6850-01-585-6425
1 gallon	6850-01-268-6705
5 gallon	6850-01-268-6700
5 gallon	6850-01-263-8432
5 gallon	6850-01-268-6706
55 gallon	6850-00-782-2736
55 gallon	6850-01-263-8433
55 gallon	6850-01-414-7086

The warranty shelf life of the product is 5 years from date of batch approval.

### Specifications

AMS-2644	AMS-2647
ASME B & PV code Sec V	
ASTM E-165	ASTM E-1417
ISO-3452	
P & W PMC # 4353-7	SPOP-82
R-R Omat # 651D	RR RPS-702-7
Snecma sensibilité S3	



### GHS Information



#### Warning

#### GHS Hazard Statements:

**H315:** Causes skin irritation.  
**H319:** Causes serious eye irritation.

#### GHS Precautionary statements:

**P102:** Keep out of reach of children.  
**P261:** Avoid breathing dust/fumes/gas/mist/vapors/spray.  
**P280:** Wear protective glove/clothing/eye protection/face protection.  
**P284:** In case of inadequate ventilation wear respiratory protection.



#### GHS response statements:

**IF INHALED:** Remove person to fresh air and keep comfortable for breathing, get medical advice/attention if you feel unwell.  
**IF ON SKIN:** Wash with plenty of water. If skin irritation occurs, get medical advice/attention.  
**IF IN EYES:** Rinse cautiously with water for several minutes. Remove contact lenses, if present and easily to do. Continue rinsing, get medical attention.  
**IF SWALLOWED:** Immediately call a poison center/doctor/physician. Do Not induce vomiting.  
**IF ON CLOTHING:** Take off contaminated clothing and wash it before reuse.

#### Transport:

DOT- not regulated.  
 IATA- not regulated.  
 IMDG- not regulated.

NDT Supply.com, Inc.  
 7952 Nieman Road  
 Lenexa, KS 66214-1560 USA

Phone: 913-685-0675, Fax: 913-685-1125  
 e-mail: [sales@ndtsupply.com](mailto:sales@ndtsupply.com), [www.ndtsupply.com](http://www.ndtsupply.com)

