Met-L-Chek®

Penetrant Professor Approved

Product Data Sheet

FP-923

Fluorescent Penetrant

Met-L-Chek manufactures a complete line of penetrants used in the fluorescent (**Type 1**) and visible (**Type 2**) dye penetrant inspection process. All Met-L-Chek penetrants are qualified to **AMS-2644** and are sold under the ***Met-L-Chek®*** and **Pen-Chek®** trademarks.

FP-923 is approved to **AMS-2644** as a fluorescent (**Type 1**); Methods "**A**", and "**C**"; sensitivity level **3** water washable inspection penetrant. For Method "**C**" applications it is used with **E-59**, **E-59A**, **R-503**, and **R-504**. **FP-923** is applied by immersion, spray, or wipe on. It is approved for high sensitivity aerospace applications.

FP-923 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 "A" 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-923** 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. 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 (black light) .

5*. Dry part; temperature not to exceed 71˚C (160˚F), time - only long enough to dry surface.

6. Apply dry powder developer, form "a" (**D-72A**), by dusting, or non aqueous developer, form "d"(**D-70**), by spraying.

6A*. If water based developer form "c"(**D-78B**) is used it is applied by immersion or spray, prior to step 5 drying.

7. Wait a minimum of 10 minutes before inspection. Maximum time is 1 hour for form "d " (non aqueous) and maximum 4 hours for form "a" (dry powder). If times are exceeded, clean part and reprocess.

8. Use UV-A illumination of >1000 μW/cm^2 @ 15 inches (38.1 cm) in a darkened area of < 21 lux visible light (< 2 foot candles).

Guide to METHOD "C" (wipe off) 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-923** 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).

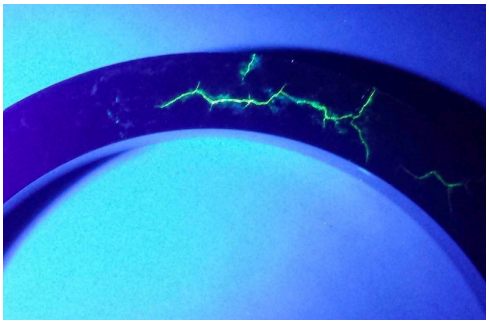
4. Moisten cloth with **E-59**, **E-59A**, **R-503** or **R-504** and wipe penetrant from surface. **Do not** spray remover on surface to remove penetrant, as sensitivity will be impaired. Water may be used to wipe **FP-923** from the surface, but the surface must be dried before developer is applied.

5. Apply dry powder developer **D-72A** by dusting, or non aqueous developer **D-70** by spraying.

6. Wait a minimum of 10 minutes before inspection.

7. Inspect under UV-A illumination of >1000 μW/cm^2 @ 15 inches (38.1 cm) in a darkened area of < 21 lux visible light (< 2 footcandles).

Fluorescent Penetrant Indication



Met-L-Chek®

Penetrant Professor Approved

Product Data Sheet

FP-923

Fluorescent Penetrant

Typical Physical Properties

Form: clear yellow green liquid
Density: 918 g/L
Flash Point: > 93˚C (> 200˚F)
Viscosity 11.3 mm^2/s
Water Tolerance:> 10 %
Water Content: < 1 %
Fluorescent Brightness: (AMS-2644 requirement > 90 %)
117.7%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

Specifications

AMS-2644
ASTM E-165
ISO-3452
SPOP-82
R-R CSS-232
BAC 5423
ASME B&PV code Sec. V
ASTM E-1417
P & W PMC # 4360
AMS 2647
R-R RPS-702
PMC Code 9
HONEYWELL EMS 52309

Product Availability

12 x 400 mL (16oz) aerosol
6 x 1 pint (0.4L) can with dauber
1 gallon (3.7L) can
5 gallon (18.9L) pail
55 gallon (208L) drum

NSN

1 gallon	6850-01-263-8430
5 gallon	6850-01-263-2263
55 gallon	6850-01-263-4056

Contact Us

United States
McGean
Phone: +1-216-441-4900
Fax: +1-216-441-1377

United Kingdom
McGean UK
Phone: +44-1902-456563
Fax: +44-1902-457443

Singapore
McGean Singapore
Phone: +65-6863-2296
Fax: +65-6863-2297