



PENETRANT PROFESSOR APPROVED

PRODUCT DATA SHEET

FP-922

Fluorescent Penetrant

1
3/09



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-2644E 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-922 is approved to AMS-2644E as a fluorescent (Type 1); Methods “A”, and “C”; sensitivity level 2 water washable inspection penetrant. For Method “C” applications it is used with E-59, E-59A, R-503, and R-504. FP-922 is applied by immersion, spray, or wipe on. It is approved for medium sensitivity aerospace applications

FP-922 is listed on the Qualified Products List for AMS-2644E. It meets the requirements of AMS-2647C, ASME Boiler and Pressure Vessel Code, ASTM E-165, and ASTM E-1417, and 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-1417-05

Guide to METHOD “C” wipe off processing per ASTM E-1417-05

- 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-922 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 use 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 D-72A by dusting, or non aqueous developer D-70 by spraying.
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/cm² @ 15 inches (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-922 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-922 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/cm² @ 15 inches (38.1 cm) in a darkened area of < 21 lux visible light (< 2 footcandles).



FP-922 fluorescent penetrant indications on aluminum aerospace structure



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Typical Physical Properties

Form: yellow green liquid
Density: 902 g/L
Flash Point: > 93°C (> 200°F)
Viscosity 8.5 mm²/s
Water Tolerance: 9.5 %
Fluorescent Brightness: (AMS-2644 requirement > 80 %)
Corrosion of aluminum: none
Corrosion of carbon steel: none
Corrosion of magnesium: none
Corrosion of stainless steel: none
Corrosion of titanium: none
Chloride content: < 200 ppm (0.02%)
Fluoride content: < 50 ppm (0.005%)
Sodium content: < 100 ppm (0.01%)
Sulfur content: < 200 ppm (0.02%)
Mercury: none
VOC's: 0 g/L
Ozone layer depleting substances: none
PCB's: none

Product Availability

1 gallon (3.7L) metal can
5 gallon (18.9L) metal pail
55 gallon (208L) metal drum

NSN #

1 gallon **6850-01-267-7987**
5 gallon **6850-01-263-2261**
55 gallon **6850-01-263-2262**

Specifications

AMS-2644E	AMS-2647C
ASME B & PV code 07 sec V	
ASTM E-165	ASTM E-1417
ISO-3452-2005E	
P & W PMC # 4351-7 Rev.AB	SPOP-82
RR RPS-702-7	RR CSS-232

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

Transport: DOT: Bulk - Stain, not regulated

Hazards Eye irritant

Classification: **NFPA Health-1, Flammability-1, Reactivity-0.**

EU- Xn; R65/R66; Xi; R36/38; Xn; R222; Xi; R41

WHMIS(Canada) D2B (bulk)

Human health hazards: Eye irritant.

First aid measures

Eyes: Check for contact lenses and remove. Flush eyes with clean water holding eyelids open. Seek medical attention.

Skin: Remove contaminated clothing. Wash exposed area with soap and water. Apply moisturizing lotion. Launder clothing before reuse. Clean shoes before reuse.

Swallowing: Do not induce vomiting. Small amounts are not expected to cause significant harm, call a physician.

Inhalation: Remove to fresh air.

See MSDS for detailed health, safety, and disposal information.



7952 Nieman Road, Lenexa, KS 66214-1560 USA
Phone: 913-685-0675, Fax: 913-685-1125
www.ndtsupply.com, sales@ndtsupply.com