



Penetrant Professor Approved

Product Data Sheet

FBP-913

Fluorescent Penetrant



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.

FBP-913 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**. **FBP-913** is applied by immersion, spray, or wipe on. It is approved for high sensitivity aerospace applications.

FBP-913 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.

FBP-913 is a special oil and solvent free formulation which utilizes biodegradable components, and is VOC free.

Guide to METHOD “A” processing per **ASTM E-1417**

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.

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2. Apply **FBP-913** penetrant using spray, immersion, or wipe on.

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3. Wait a minimum of 10 minutes; 20 minutes if temperature is 4.4°-10°C (40-50°F).

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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) .

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 **FBP-913** from the surface, but the surface must be dried before developer is applied.

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

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

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

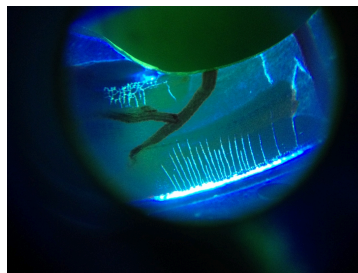
6. Wait a minimum of 10 minutes before inspection.

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

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).

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).



FBP-913

Fluorescent penetrant indications on grinding cracks

