

## **CIRCLE SYSTEMS, INC.**

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### **Technical Bulletin #269X** **CircleSafe® 820AX**

CircleSafe® 820AX is an aerosol spray can of Mi-Glow® 106 black particles and CircleSol M, a refined petroleum distillate. It is designed to be used with visible light inspection for detecting discontinuities found in finished products and structural fabrications. Higher particle concentration provides heavier indication buildup for easy detection. The carbon dioxide propellant reduces combustible hazard. CircleSafe® 820AX can be used with Mi-Glow® WCP.

#### **Properties**

Particle Color: Black

Concentration: 12.0 grams of particles per liter of fluid.

Characteristics: Non-flammable gas propellant. Flash Point (for Oil): 215°F by Pensky-Martens Closed Cup (ASTM D-93).

Particle Size: Not less than 98% passage through US Standard No. 325 (45 µm) sieve as defined in AMS 3042. The typical range of particle sizes is from 0.5 to 4.0 µm, with an average particle size of 1.5 µm.

Sensitivity: CircleSafe® 820AX shows a minimum of 6 lines on an AISI 01 Ketos tool steel ring (as defined in SAE AS5282), set on a 1-inch diameter copper bar, magnetized with 2500 A of direct current.

Certification: Particles, carrier and mixture meet or exceed all relevant industry specifications, including but not limited to MIL-STD-1949, MIL-STD-271(SH), ASTM E 709, ASTM B & PV Code - Section V and NAVSEA 250-1500-1. AMS 3041, AMS 3042, AMS 3161, AMS 2641 and DOD-F-87935 are covered under MIL-STD-1949. Certification is included with each shipment.

Temperature Limits: 120°F Maximum

Shelf Life: Two (2) years when stored in a closed container away from heat (<120°F), sparks, open flames and oxidizers. A Certificate of Shelf Life is available upon request.

#### **Directions for Use**

##### Preparation:

1. For best results, use when can is between 70° and 90° F (21° and 32° C).
2. Thoroughly clean surface to be examined.
3. Shake can vigorously for fifteen seconds and occasionally during use.
4. Point spray button toward inspection surface, holding can 7 to 9 inches (18 to 24 cm) from surface.

5. Spray solution onto suitable, magnetized surface until the surface is thoroughly covered with solution.
6. Examine the surface under visible light for indications.
7. If clogging develops, turn spray button 1/4 turn. If clogging persists, remove and clean spray button. DO NOT put pin or other object into can opening. Gently replace spray button with a twisting motion, holding top of can and spray button opening pointed away from you.
8. Discard empty can in trash. DO NOT place in garbage compactor.

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