

## **CIRCLE SYSTEMS, INC.**

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### **Technical Bulletin #269** **CircleSafe® 820A**

CircleSafe® 820A is an aerosol spray can of Mi-Glow® 106 black particles, premixed with liquid Wetting Agent 771, formulated in water media. 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. This aerosol is packaged in a carbon dioxide propellant for odor-free, fume-free, non-combustible inspection. CircleSafe® 820A can be used with Mi-Glow® WCP.

#### **Properties**

Particle Color: Black

Concentration: 12.0 grams of particles per liter of fluid.

Characteristics: Water based, non-flammable, non-corrosive and free of odors and fumes.

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® 820A 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 meet or exceed all relevant industry specifications, including but not limited to MIL-STD-1949, MIL-STD-271(SH), AMS 3042 and NAVSEA 250-1500-1. Certification is included with each shipment.

Temperature Limits: 120°F Maximum

Shelf Life: Two (2) years when stored in a clean area, away from excessive heat or cold. 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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