

## CIRCLE SYSTEMS, INC.

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## TECHNICAL BULLETIN #270

### CircleSafe 850A

**CircleSafe 850A** is a pre-proportioned combination of fluorescent particles and a specifically formulated wetting agent in water, packaged in carbon dioxide charged aerosol cans. **CircleSafe 850A** is designed to be used in white light inspection for revealing defects as found in structural fabrications. Ultra-violet light may be used to further highlight defect indications in either a well-lit or darkened area.

### PROPERTIES

Particle Color: Fluorescent orange-red under black light and visible red under white light.

Particle Size: Not less than 98% passage through US Standard No. 325 (45  $\mu\text{m}$ ) sieve. The typical range of particle sizes is from 5 to 20  $\mu\text{m}$ , with an average particle size of 9  $\mu\text{m}$ .

Sensitivity: CIRCLESAFE 850A 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.

Concentration: 8.0 grams of particles per liter of fluid.

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

Certification: Particles meet all relevant specifications including but not limited to MIL-STD-1949, ASTM E 1444, AMS 3042, MIL-STD-271(SH), NAVSEA 250-1500-1, NTR-1E. Certification is included with each shipment.

### DIRECTIONS

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 white and/or UV 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 pick-up. DO NOT place in garbage compactor.

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