

CIRCLE SYSTEMS, INC.

479 West Lincoln
P.O. Box 1228
Hinckley, IL 60520
Ph.: 815-286-3271
Fax: 815-286-3352
customerservice@circlesafe.com



TECHNICAL BULLETIN #241

MI-GLOW 810

MI-GLOW 810 is a green magnetic powder used for fluorescent magnetic particle inspection. This product is a premix of MI-GLOW 800 fluorescent particles and WETTING AGENT for use in a water system. MI-GLOW 810 is designed for revealing very fine defects, such as those found in finished products and critical applications.

Properties

Particle Color: Fluorescent yellow-green

Specific Gravity: 0.8 g/ml

Particle Size: Not less than 98% passage through US Standard No. 325 (45 μm) sieve as defined in AMS 3044. The typical range of particle sizes is from 1 to 12 μm , with an average particle size of 5 μm .

Sensitivity: MI-GLOW 810 shows a minimum of 8 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.

Particle Certification: Particles meet all relevant specifications, including but not limited to MIL-STD-1949, AMS 3044, MIL-STD-271, NAVSEA 250-1500-1, NTR-1E, ASTM E 1444. Certification is included with each shipment.

Temperature Limit: 120°F Maximum

Preparation: MI-GLOW 810 should be used at a concentration of 1.5 oz. av. per one gallon (11.25 grams/liter) of water. For best results add a small amount of water to the powder and form a slurry prior to addition to the bath. When using the scoop provided with the two-pound jar of MI-GLOW 810, two level scoops treat 1 gallon (3.8 L) water.

Concentration Test: The suspension as delivered on the part or billet should be tested for magnetic substance content by the following method at 8-hour intervals or shorter intervals if required by the user. The method of test should be as follows:

1. Run the circulating pump on the test equipment for at least 30 minutes.
2. Fill a 100 ml graduated centrifuge tube as specified in ASTM D96 or equivalent, to the 100 ml mark with suspension directly from the hose or other device used for applying it to the part in an inspection, or from an immersion tank. Demagnetize the suspension if considered necessary and let it stand undisturbed for 30 minutes.
3. Read the volume of the precipitate in the graduate. The volume should be 0.15 to 0.30 ml.

November 2008