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TECHNICAL BULLETIN #240

MI-GLOW 800

MI-GLOW 800 is a green magnetic powder used for fluorescent magnetic particle inspection. It is formulated for use in a solvent media, but may also be used with specially formulated MI-GLOW water conditioners (see CIRCLESAFE and MI-GLOW 810 Technical Bulletins). MI-GLOW 800 is designed for revealing very fine defects, such as those found in finished products for the aerospace industry and other critical applications.

Properties

Particle Color: Fluorescent yellow-green

Specific Gravity: 0.4 g/ml

Particle Size: Not less than 98% passage through U.S. Standard No. 325 mesh sieve (45 μm) 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 800 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. Certification is included with each shipment.

Temperature Limit: 120°F Maximum

Directions for use in a Solvent Media

Preparation: MI-GLOW 800 should be used at a concentration of 12-13 oz av. per 100 gallons (1.0 grams/liter) of an approved light oil media. For best results add a small amount of oil to the powder and form a slurry, prior to addition to the bath. When using the scoop provided with the one-pound jar of MI-GLOW 800, one level scoop treats 1 gallon of an approved light oil media.

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.

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