

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 #264 Mi-Glow® 718X

Mi-Glow® 718X is a combination of Mi-Glow® 800 and Mi-Glow® 900 fluorescent yellow-green particles premixed with liquid Wetting Agent 771 for use in water media. This advanced formulation allows for superior corrosion protection, wetting and particle mobility. This product is designed to be used with black light, for revealing discontinuities on both machine and unfinished ferromagnetic materials.

Properties

Particle Color: Fluorescent Yellow-Green

Specific Gravity: 1.3 g/ml - for the concentrate

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 30 µm, with an average particle size of 10 µm.

Sensitivity: Mi-Glow® 718X 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 or exceed all relevant industry 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 Limits: 32-120°F (0-49°C)

Shelf Life: One (1) year, when sealed bottles are not subjected to extreme heat or cold. A Certificate of Shelf Life is available upon request.

Directions for Use

Preparation: Mi-Glow® 718X should be used at a dilution of 1 part concentrate with 39 parts of water. This will give a fluorescent particle concentration of 1.5 grams per liter. The recommended proportion may vary depending on specific applications. Each bottle should be thoroughly mixed before using. If a bottle is emptied, it should be rinsed with water and the contents added to the system.

Settling Test: The settling test, to check particle concentration and contamination, shall be performed upon startup, at each shift thereafter and whenever the bath is changed or adjusted.

Checking Bath Concentration - The settling test is essential to check the bath concentration and is accomplished by gravity settling in a graduated pear-shaped centrifuge tube as specified in Guide E709.

1. Run the pump for 30-60 minutes, to agitate the suspension thoroughly and to assure particle distribution.
2. Fill 100 ml sample from the delivery hose into the centrifuge tube.
3. Demagnetize the sample and stand, together.
4. Allow particles to settle for a minimum of 30 minutes or until completely settled.
5. The recommended volume is between 0.15 and 0.25 ml and will vary from one specification to another. (Read the settled particles that are fluorescent using a black light.)
6. Adjust bath, either by adding particles or vehicle, if necessary.

Checking Bath Contamination - To determine bath contamination, use the same sample that was used for the concentration settling test, and examine the liquid above the settled particles with a black light. The liquid should be clear. If the bath is noticeably fluorescent, the bath must be changed. Next, examine the graduated portion of the tube where the particles have settled, with a black light and visible light for striations or bands of contamination that will be different in color and appearance than the settled particles. These striations or bands represent solid contamination, and if they exceed 30% of the settled particles, the bath should be changed.

DISCLAIMER: OUR TECHNICAL ADVICE, INFORMATION AND STATEMENTS GIVEN VERBALLY, IN WRITING OR IN THE FORM OF TEST RESULTS, ARE OFFERED FOR YOUR GUIDANCE WITHOUT WARRANTY. NO WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE IS MADE. IT IS THE USER'S RESPONSIBILITY TO TEST THE SUITABILITY OF EACH PRODUCT FOR HIS INTENDED PROCESS AND APPLICATIONS. OUR GUARANTEE IS LIMITED TO THE CONSISTENT QUALITY OF OUR PRODUCTS.
