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**Technical Bulletin 322**  
**Mi-Glow® Underwater 12**

Mi-Glow® Underwater 12 is red particles which are used in visible light, UV-A light and blue light, pre-mixed with a powdered Wetting Agent for use in underwater inspection. These particles have a range of sizing from fine to medium sized, allowing them to detect a broader range of discontinuities. Designed for use in a variety of underwater inspections, including offshore structural welds, pipeline inspection, ship husbandry and to enhance underwater photography.

**Properties**

Particle Color: Fluorescent Orange/Red

Specific Gravity: 0.8 g/ml

Light Source: Daylight fluorescent under visible light sources (recommend  $\geq 200$  ft candles), fluoresces in black light and blue light.

Sensitivity: Mi-Glow® Underwater 12 offers the capability of enhancing finer defects with its sieve size. Eighty percent (80%) of Mi-Glow® Underwater 12 particles are less than 12  $\mu\text{m}$  in diameter.

Temperature Limits: 32-120°F (0-49°C)

Shelf Life: Four (4) years, when closed containers are stored in a clean, dry environment away from excessive heat or cold. A Certificate of Shelf Life is available upon request.

**Directions for Use**

Preparation: It is suggested that Mi-Glow® Underwater 12 be added to water at a concentration of 2 oz. av. weight to one US gallon of water (15 grams per liter of water). The preparation may vary due to customer practice and specific application. The storage reservoir should have mechanical or air agitation to help keep the particles in suspension.

Particle concentration adequacy is recommended to be checked by a magnetic field indicator or by observation of particles applied to a magnetization device (i.e., electromagnet yoke leg).

When these particles are used in a salt water environment, a fresh batch solution should be made daily to prevent corrosion of the particles.

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