FlawGlo™

Technical Data Sheet

FlawGlo WF 418

Water Based Fluorescent Powder

FlawGlo WF 418 is a dual response particle that easily detects discontinuties in UV-A or a combination of UV-A and visible light. FlawGlo WF 418 particles are premixed with Wetting agentfor use in water based systems. FlawGlo WF 418 is capable of being used to inspect on surfaces upto 300°F (149°C) without additives using specific directions detailed below.

General Appearance:

- Aspect: Fluorescent Yellow Green powder

Properties

- Concentration: 6 g/ltr
- Temperature Limit: Dry Powder Storage: 32-120°F (0-49°C); Application: 32-300°F (0-149°C)
- Density: 1.1 g/ml
- Particle Size: Not less than 98% passage through sieve as defined in AMS 3044. The typical range of particle sizes is from 2 to 18 µm, with an average particle size of 7.5 µm.
- Sensitivity: FlawGlo WF 418 shows a minimum of 8 lines on a Ketos tool steel ring (as defined in SAE AS5282), set on a 25mm diameter copper bar, magnetized with 2500 A of direct current.
- Dual Response Inspection - ASTM E709 (p. 8.5.3 - UV-A or a combination UV-A and visible light), NAVSEA 250-1500-1

Approval & Specification:

- ASTM E-1444
- ASTM E-3024
- AMS 3044
- MIL-STD-271
- NAVSEA 250-1500-1
- NTR-1E
- ASTM E709

Shelf Life: Four (4) years, when closed containers are stored in a clean, dry environment away from excessive heat and cold.

Pack size: 1kg container

Application Specific Directions for Use – UV-A Inspection

- Lighting: The inspection area should be darkened such that no more than 3 foot candles (30 lux) of white light is present. A UV-A light source capable of 1000 µW/cm2 at the part surface is recommended.
- Preparation: FlawGlo WF 418 should be used at a concentration of 6.0 g/ltr . For best results, add a small amount of water to the powder to form a slurry prior to addition to the bath.
- Settling bulb volume: 0.15 – 0.25 ml

Application Specific Directions for Use – Dual Response Inspection (UV-A & visible light)

Lighting	Preparation – per 10 gallons	Settling Bulb Volume
1000µW/cm² + 0 – 100 lux	6.0 g/liter	0.15 – 0.25 ml
1000µW/cm² + 101-250 lux	10 g/liter	0.25 – 0.35 ml
1000µW/cm² + 251 - 400 lux	14 g/liter	0.35 – 0.45 ml
5000µW/cm² + 0 – 100 lux	6.0 g/liter	0.15 – 0.25 ml
5000µW/cm² + 101 - 250 lux	10 g/liter	0.25 – 0.35 ml
5000µW/cm² + 251 - 400 lux	10 g/liter	0.25 – 0.35 ml
5000µW/cm² + 401 - 500 lux	14 g/liter	0.35 – 0.45 ml

Additional Directions for Use in Applications above 120°F

- Particle Application - FlawGlo WF 418, suspended in water, shall be applied by the wet continuous method – the medium is applied prior to magnetizing the part. Proper timing of part magnetization and application of particle suspension over the area to be examined are required to obtain the proper formation and retention of indications.

- Materials Performance Verification - The overall performance of this special high temperature application shall be verified, recorded and maintained daily. A reliable method for material performance verification is the MTU test block . If the correct magnetic particle indications are produced and identified on this test block, then the material and bath is verified for further use. The bath must be replaced if indications are not produced.

Note: These directions apply to both UV-A inspection areas and UV-A and visible inspection areas (dual response) as described above.

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.

ARORA
Arora Technologies (P) Limited

Plot No. D-183/8, MIDC, TTC Nerul, Navi Mumbai, Maharashtra 400706, India
T: +91 22 6138 0600 | E: info@arorandt.com | W: www.arorandt.com

MADE IN INDIA