MR®114HB, Magnetic Powder composition – Fluorescent (high brilliance)

MR®114HB is an ultra bright fluorescent green-yellow (under UV), dry green, highly sensitive ferromagnetic powder designed to be used in water which is used for Magnetic Particle Testing (MPT). MR114HB particles is pre-mixed with water conditioner – including corrosion inhibitor, anti-foam and wetting agent; manufactured for an optimum sensitivity, excellent discontinuity definition, brightness with minimal to nil background and magnetic characteristics for wet method fluorescent MPT.

It detects medium to fine surface and slightly sub surface discontinuities such as cracks, inclusions, seams, tears, laps, flakes and other welding defects.

Pack Size Bulk 1 kg

Additional information

PROPERTIES	Appearance – free flowing green magnetic powder Chemical Composition – mixture of magnetic powder and water conditioner Basis – ferro magnetic powder Colour in visible light – forest green Colour in UV light – fluorescent green-yellow Odour – Odourless
APPROVALS	ASME Code V, Art. 7 DIN ISO 9934 (BS 5044) ASTM E 709 RCC-M PMUC (EDF) AMS 2641 AMS 3041 AMS 3043 ASTM E1444/1444M

PARTICLE SIZE	7 – 10 µm * *as determined by industrial typical method for measuring particle size
SAE SENSITIVITY	8 ** **as per indications on Ketos ring as defined in ASTM E1444/1444M
SEDIMENT	0.1 – 0.2 ml/100ml (1/2h) *** according to ASME ***with a dilution of 10-20 gm / L (in water)
RECOMMENDED USAGE	NDT Method – Magnetic Particle Testing (wet method) Application – unfinished to semi finished surfaces Usage Temperature – 41°F to 131°F / +5 °C to +52 °C Storage Temperature – 41°F to 113°F / +5 °C to +45 °C
REFERENCE TEST BLOCKS	Reference test block Type 1 (MTU No.3) Reference test block Type 2 Magnetic Field Indication acc. to ASTM E709 (Pie Guage) Test body according to Prof. Berthold Quantitative Quality Indicators Shims (QQI as per AS5371) Magnetic stripe card Type 2000 ASTM centrifuge tube (for fluorescent) acc. to ASME Code V, Art. 25, SE-709

Features

- Brilliant, clear green-yellow indications under UV light
- Ultra-high brilliance
- High sensitivity
- Minimal to no background
- Optimal settling
- No odour
- Quick indications
- Long bath life
- Related products

How it Works

Magnetic particle inspection (MPI) is a non-destructive testing (NDT) method used to detect surface and slightly subsurface cracks in ferromagnetic materials such as iron, steel, and nickel. The process involves magnetizing the part to be inspected and then applying appropriate magnetic particles in the form of a dry powder or suspension to the surface of the part. The magnetic particles are attracted to areas of flux leakage, which are areas where the magnetic field is distorted by the presence of a crack or other defect creating a visible indication that can be used to identify and evaluate the nature and extent of the defect.

The application of the magnetic powder creates a visible indication of the location and shape of the crack or other defect. The powder accumulates at the location of the defect, forming a visible indication or "magnetic particle indication." This indication is then examined by a trained inspector using ultraviolet light or other illumination to identify the precise location, size, and orientation of the defect.