14HF

Oil-based Fluorescent Magnetic Ink



MAGNAGLO® 14HF is an oil-based, ready-to-use fluorescent ink for wet method magnetic particle testing. It gives clear bright yellow/green indications when viewed in a darkened area under UV(A) of peak wavelength 365nm.

Used in conjunction with suitable magnetising equipment, 14HF will locate medium-fine surface and slightly sub-surface defects. 14HF is widely regarded as the test material of choice for aerospace applications.

FEATURES

- Ready-to-use
- Clear, bright indications under UV light
- Low maintenance, oil-based suspension
- High sensitivity
- Excellent fluorescent contrast for quick identification and better inspection quality
- Excellent particle mobility
- Good dispersion stability
- Protects parts and equipment against corrosion
- Great concentration consistency
- Superior surface wetting
- Even surface coverage for better detection

APPLICATIONS

Defect location: surface and slightly subsurface

Ideal for:

- Detecting very fine to fine discontinuities
- Critical applications
- After secondary processing
- In-service inspections
- High strength alloys

Ideal for:

- Inclusions
- Seams
- Shrink cracks
- Tears
- Laps
- Flakes
- Welding defects
- Grinding cracks
- Quenching cracks
- Fatigue cracks

SPECIFICATION COMPLIANCE

- AMS2641
- AMS3044
- AMS3045
- AMS3046 (Aerosols only)
- ASME BPVC-V
- ASTM E709
- ASTM E1444/E1444M
- EN ISO 9934-2
- MIL-STD-2132
- Rolls Royce RRP 58004 (CSS 231)
- SAFRAN In 5300
- SNECMA DMR70-520

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COMPOSITION

A suspension of magnetic particles in a high-flash, low-odour petroleum distillate.

PRODUCT PROPERTIES

Form and colour	Brown liquid
Flash point	> 93°C (-40°C for aerosol propellent)
SAE sensitivity	8
Particle size range	5 - 12 µm
Settlement volume	0.1 – 0.4 ml per 100 ml

Like all Magnaflux materials, 14HF is closely controlled to ensure batch-to-batch consistency, optimum process control and inspection reliability.

USER RECOMMENDATIONS

NDT Method	Magnetic Particle Testing, Fluorescent, Wet Method
Storage temperature	10°C to 30°C
Usage temperature*	-5°C to 48°C
Suspension vehicle	Carrier II
Magnetic particles	14A
Cleaner	SKC-S, C10
UV lamps	EV6000, EV6500, ST700
Accessories	Centrifuge Tube (part no. 044C005) MTU No.3 Test Block (EN ISO 9934-2)

* For use of an inspection vehicle conforming to AMS2641, minimum temperature is 6 °C.

INSTRUCTIONS FOR USE

Clean the component before testing to reduce the risk of contamination and provide a suitable test surface.

Mix the ink thoroughly and keep it agitated during testing.

Apply the ink by spraying, flooding or immersion, depending on your chosen method (see below):

Wet continuous method

Apply the ink to all surfaces of the component and apply a magnetising current. Remember to stop the flow of ink before the current is switched off, otherwise there is a risk that the force of the ink flood may wash away indications.

Wet residual method

This method is generally less sensitive than the continuous method and is more susceptible to rapid particle depletion and bath contamination.

- Pre-magnetise the part to be tested.
- Immerse the part in a bath of the ink.
- Remove it and allow it to drain.
- Inspect the part.

During use, the magnetic content of any ink bath will become depleted so you will need to check your bath strength at least once each day. The most widely-used way of checking an ink's settlement volume is by using a graduated ASTM pear-shaped centrifuge tube.

When the settlement volume approaches the lower limit (0.1 ml), check the bath. If the bath appears contaminated, or if it has been in use for a long time, replace the contents. If it is still clean and uncontaminated, add some 14A powder.

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After inspection, remember to completely de-magnetise your component before cleaning, to ensure easy removal of any residual powder particles.

PACKAGING AND PART NUMBERS



008A105 (x 10)



058C006 (x 4)



058C007

HEALTH AND SAFETY

Review all relevant health and safety information before using this product. For complete health and safety information, refer to the Safety Data Sheets, which are available at **www.magnaflux.eu**