7HF

Oil-Based Visible Magnetic Particle Ink



MAGNAVIS® 7HF is a highly-sensitive, oil-based magnetic particle ink for visible wet method magnetic particle testing. 7HF provides clear, strong indications, making it perfect for locating fine and medium discontinuities on finished parts. It is ideal for field testing, spot inspections and places where bulk processing is impractical.

7HF is often used with our WCP-2 white contrast paint to improve contrast and inspection sensitivity. This process is especially suited for remote inspections of tubing, piping and large structures.

BENEFITS

Maximise indication detection

- Find indications of all shapes and sizes, thanks to the smallest particle on the market.
- Heavy buildup of highly magnetic particles around leakage fields make for heavy-contrast indications, especially when used with WCP-2 white contrast paint.

Convenient to use

- Inspect in all conditions without the need for darkness or UV lights.
- Available in a convenient aerosol format for easy carrying and use in the field.

Wide application versatility

- Inspect a wide range of components without fear of corrosion or specification non-conformance

FEATURES

- Clear indications under visible light
- Heavy particle buildup
- Great particle mobility
- Protects parts and equipment against corrosion
- Superior surface wetting
- Very small particle size
- Works in visible light
- Oil-based formula
- Very low toxicity
- Low odour

SPECIFICATION COMPLIANCE

- AMS2641
- AMS3041
- ASM3043 (Aerosols only)
- ASME BPVC-V
- ASTM E709
- ASTM E1444/E1444M
- EN ISO 9934-2
- MIL-STD-2132

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APPLICATIONS

Defect location: surface and slightly subsurface

Ideal for:

- Detecting fine and medium discontinuities
- Field testing
- Spot inspections
- In-service inspections
- Machined parts
- Light surfaces
- Difficult-to-reach areas

Ideal for:

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

COMPOSITION

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

PRODUCT PROPERTIES

Form and colour	Black liquid
Flash point	> 93°C (bulk product)
SAE sensitivity	6 - 7
Particle size range	0.2 - 2.0 µm
Viscosity at 20°C	2.5 mm^2/s
Density	0.8 g/cm^3
pH (2% solution)	Neutral

Like all Magnaflux materials, our visible magnetic inks are closely controlled to ensure batch-to-batch consistency, optimum process control and inspection reliability.

USER RECOMMENDATIONS

NDT Method	Magnetic Particle Testing, Visible, Wet Method
Storage temperature	10°C to 30°C
Usage temperature*	-5°C to 50°C
Suspension Vehicle	Carrier II
White Contrast Paint	WCP-2
Cleaner/remover	SKC-S, C10
Accessories	Centrifuge tube (part no. 044C003)

* 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 to provide a suitable test surface.

If the test surface is a dark colour, apply a thin coating of a suitable white contrast paint, such as WCP-2, to provide a contrasting background.

Before using, shake the aerosol can, or agitate the ink to ensure uniformity of mix and check it has the correct settlement volume (1.5 - 2.4 ml).

Apply the ink by spraying, flooding or immersion, depending on your chosen method (see next page).

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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.

Remember to shake/agitate the ink regularly during use to ensure uniformity of mix. If you are using a bath and it appears contaminated, or if it has been in use for a long time, replace the contents.

During use, the magnetic content of any ink 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.

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

PACKAGING AND PART NUMBERS



008A103 (x 10)

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**