

# 7HF

## Oil-Based Visible Magnetic Particle Suspension

A highly-sensitive oil-based magnetic particle aerosol for non-fluorescent (visible) wet method magnetic particle testing to locate fine and medium discontinuities on finished parts.

7HF provides clear, strong indications due to the heavy buildup of the highly magnetic particles. The convenient aerosol packaging is ideal for field testing, spot inspections and places where bulk processing is impractical, and the wide spray pattern makes it easy to cover large areas for faster processing during remote inspections of tubing, piping and large structures.

7HF is often used with WCP-2 white contrast paint to improve contrast and inspection sensitivity.



### BENEFITS

#### Maximize indication detection

- Find indications of all shapes and sizes thanks to the smallest particle on the market
- Heavy buildup of highly magnetic particles around all 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
- Reduce downtime and evenly apply product due to newly upgraded 360° sprayer

#### Wide application versatility

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

### FEATURES

- 360° aerosol sprayer
- Clear indications under visible light
- Heavy particle buildup
- Great particle mobility
- Protects parts and equipment against corrosion
- Broad spray pattern provides even surface coverage over large areas
- Superior surface wetting
- Very small particle size
- Works in visible light
- Oil-based formula
- Very low toxicity
- Low odor

### SPECIFICATION COMPLIANCE

- AMS 3043
- ASTM E709
- ASTM E1444
- ASME BPVC
- Boeing PS-21201
- ISO 9934
- MIL-STD-2132
- NAVSEA 250-1500-1
- NAVSEA T9074-AS-GIB-010/271

### 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

**Defect examples:**

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

### PROPERTIES

<b>Appearance</b>	Oily liquid and fine particle solution
<b>Color in Visible Light</b>	Black
<b>Odor</b>	Odorless
<b>Mean Particle Size*</b>	< 2 microns
<b>SAE Sensitivity**</b>	> 6
<b>Flash Point</b>	> 200°F / 93°C

\* As determined by industry-typical method for measuring particle size

\*\* Representative of the number of indications on a tool steel ring as defined in ASTM E1444.

### USE RECOMMENDATIONS

<b>NDT Method</b>	Magnetic Particle Testing, Nonfluorescent / Visible, Wet Method
<b>Suspension Vehicle</b>	Carrier II (petroleum distillate)
<b>Required Equipment</b>	Magnetizing device
<b>Usage Temperature<sup>†</sup></b>	42 to 120°F / 6 to 48°C
<b>Storage Temperature</b>	50 to 86°F / 10 to 30°C
<b>Settling Volume</b>	1.20 – 2.40 mL
<b>Coverage</b>	1 aerosol can will cover approximately 65 ft <sup>2</sup> (6 m <sup>2</sup> )

<sup>†</sup> Particle integrity and mobility may decline beyond these temperature limits. For use of an inspection vehicle conforming to AMS2641, minimum temperature is 6 °C.

## INSTRUCTIONS FOR USE

Use 7HF with appropriate magnetization procedure and equipment. For best results, all components, parts, or areas to be tested should be clean and dry prior to testing to provide an optimal test surface and reduce particle suspension contamination.

1. Use in a well-ventilated area.
2. For best results, apply WCP-2 before 7HF to improve contrast and inspection sensitivity.
3. Shake 7HF aerosol can well before use and occasionally during application to ensure suspension uniformity and concentration.
4. Hold the can 7 to 9 inches (18 to 24 cm) from the area to be tested.
5. Using the continuous or residual application method, spray particle suspension over the test area until it is completely covered.
6. Inspect under visible light.

To verify particle concentration, perform a sensitivity check using a known test standard prior to inspection.

## REMOVAL

All components, parts, or inspection areas must be properly demagnetized before cleaning to ensure easy particle removal. Cleaned parts may be treated with a temporary film protective coating if longer corrosion protection is required.

## STORAGE

Store in a well-ventilated area away from magnetizing equipment and heat sources. Product age, exposure to elevated temperatures, and/or exposure to a strong magnetic field may adversely

affect particle redistribution. Refer to Safety Data Sheet for additional storage instructions.

## PACKAGING

Aerosol can (case of 12) 01-1580-78

## HEALTH AND SAFETY

Review all relevant health and safety information before using this product. For complete health and safety information, refer to the product Safety Data Sheet, which is available at [www.magnaflux.com](http://www.magnaflux.com).