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## Oil-Based Visible Magnetic Particle Ink



BYOTEST® 103 is a highly-sensitive, oil-based magnetic particle ink for visible wet method magnetic particle testing. It provides clear, strong, black indications, making it perfect for locating fine and medium discontinuities on finished parts.

Used in conjunction with suitable magnetising equipment, 103 will locate medium-fine surface and slightly subsurface defects in ferrous materials. It is ideal for field testing, spot inspections and places where bulk processing is impractical.

### 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 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

- ASM3043 (Aerosols only)
- ASME B & PV Code, Sec V
- EN ISO 9934-2
- GOST R ISO 9934-2-2011

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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 black magnetic particles in a high-flash, low-odour petroleum distillate.

## PRODUCT PROPERTIES

<b>Form and colour</b>	Black liquid
<b>Flash point</b>	> 93°C (bulk product)
<b>SAE sensitivity</b>	6 - 7
<b>Particle size range</b>	0.2 - 2.0 µm
<b>Viscosity at 38°C</b>	2.5 mm <sup>2</sup> /s
<b>Settlement volume (1 hour)</b>	1.2 - 2.4 ml
<b>Sulphur content</b>	< 200 ppm
<b>Halogen content</b>	< 200 ppm

Like all Magnaflux materials, 103 is closely controlled to ensure batch-to-batch consistency, optimum process control and inspection reliability.

## USER RECOMMENDATIONS

<b>NDT Method</b>	Magnetic Particle Testing, Visible, Wet Method
<b>Storage temperature</b>	10°C to 30°C
<b>Usage temperature</b>	-10°C to 50°C
<b>Suspension Vehicle</b>	MG/MX Carrier II
<b>White Contrast Paint</b>	104A, 104plus, WCP-2
<b>Cleaner/remover</b>	C5, C10, SKC-S
<b>Accessories</b>	Centrifuge Tube

## 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 to provide a contrasting background.

Before using, shake the aerosol can to ensure that the ink is mixed thoroughly. You will need to shake the can repeatedly during use.

Spray the ink onto all surfaces of the component. The indications will be formed during the application of a magnetising current.

After inspection, the components should be properly demagnetised before cleaning.

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**PACKAGING AND PART NUMBERS**

008A171 (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 [eu.magnaflux.com](http://eu.magnaflux.com).