

# #1 Gray

## Non-fluorescent Magnetic Particles

#1 Gray provides strong contrast on most metal surfaces during dry method mag particle testing in visible light. It is ready-to-use for visible light flaw detection of surface and slightly subsurface discontinuities in ferrous metals. It can be used in a powder blower or shaken from a bottle during magnetization, and blown off while current is still being applied. On material with a high magnetic retentivity, indications can still be formed after the current has been turned off.



### FEATURES

- Sharp, color-contrast indications on high reflective surfaces
- Ready-to-use
- Good particle buildup for quick detection
- Highly refined for optimal particle shape and size combination
- Minimal dust build-up
- Does not require a black light or darkened inspection area

### SPECIFICATION COMPLIANCE

- AMS 3040
- ASTM E709
- ASTM E1444
- ASME
- MIL-STD-271
- MIL-STD-2132
- NAVSEA 250-1500-1
- NAVSEA T9074-AS-GIB-010/271

### PRODUCT PROPERTIES

<b>Appearance</b>	Fine, dry powder
<b>Color in Visible Light</b>	White-gray
<b>Odor</b>	Odorless
<b>Mean Particle Size*</b>	80 microns
<b>SAE Sensitivity**</b>	> 8

\* 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, Dry Method
<b>Required Equipment</b>	Magnetizing device, powder dispenser
<b>Usage Temperature<sup>†</sup></b>	NA to 750°F / NA to 399°C
<b>Storage Temperature</b>	50 to 86°F / 10 to 30°C

<sup>†</sup> Particle integrity and mobility may decline beyond these temperature limits.

## APPLICATIONS

**Defect location:** Surface and slightly subsurface

**Ideal for:**

- Light, medium, dark surfaces
- Detecting medium, large and course discontinuities
- Weld testing
- Forgings
- Castings
- Field testing
- Spot inspections
- In-service inspections
- Large parts
- Dark surfaces
- Extreme temperatures
- Rough/textured surfaces

**Defect examples:**

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



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## INSTRUCTIONS FOR USE

Use #1 Gray 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.

Apply a fine layer of #1 Gray to test area with a powder dispensing device, such as a powder spray bulb or powder blower. As the current is being applied, dust the powder over the part. If there is excessive powder background, gently blow the excess powder off while the magnetic current is flowing.

## REMOVAL

All components, parts, or inspection areas must be properly demagnetized before cleaning to ensure easy particle removal. Remove particles with air blower or brush.

## STORAGE

Store unused product in the original container. Keep container closed when not in use. Protect from sunlight. Store in a well-ventilated area away from magnetizing equipment. Cool, dry storage location is preferred. Refer to Safety Data Sheet for additional storage instructions.

## PACKAGING

10 lb / 4.53 kg pail 01-1716-69

45 lb / 20.4 kg pail 01-1716-87

## 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).