



MR®230, Dry Magnetic Powder – Red

MR®230 is a highly refined red ferromagnetic powder that provides strong contrast on most metal surfaces during dry method magnetic 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.

It can be used on weldments such as bridges, pipes, large tanks, machineries and equipment. It meets or exceeds all applicable industry specifications.

Pack Size Bulk 1 kg

Additional information

PROPERTIES	<p>Appearance – free flowing dry red magnetic powder</p> <p>Chemical Composition – mixture of magnetic powder & pigments</p> <p>Basis – ferro magnetic powder</p> <p>Colour in visible light – red</p> <p>Odour – Odourless</p>
APPROVALS	<p>AMS 3040</p> <p>DIN ISO 9934 (BS 5044)</p> <p>ASTM E 709</p> <p>ASTM E1444/1444M</p> <p>ASME</p>
PARTICLE SIZE	<p>75 µm *</p> <p>*as determined by industrial typical method for measuring particle size</p>
SAE SENSITIVITY	<p>8 **</p> <p>**as per indications on Ketos ring as defined in ASTM E1444/1444M</p>
RECOMMENDED USAGE	<p>NDT Method – Magnetic Particle Testing (dry method)</p> <p>Usage Temperature – 41°F to 599°F / +5 °C to +315 °C</p> <p>Storage Temperature – 41°F to 113°F / +5 °C to +45 °C</p>
REFERENCE TEST BLOCKS	<p>Reference test block Type 1 (MTU No.3)</p> <p>Magnetic Field Indication acc. to ASTM E709 (Pie Guage)</p> <p>Test body according to Prof. Berthold</p>

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

How it Works

Magnetic particle inspection (MPI) is a non-destructive testing (NDT) method used to detect surface and slightly subsurface cracks in ferromagnetic materials such as iron, steel, and nickel. The process involves magnetizing the part to be inspected and then applying appropriate magnetic particles in the form of a dry powder or suspension to the surface of the part. The magnetic particles are attracted to areas of flux leakage, which are areas where the magnetic field is distorted by the presence of a crack or other defect creating a visible indication that can be used to identify and evaluate the nature and extent of the defect.

The application of the magnetic powder creates a visible indication of the location and shape of the crack or other defect. The powder accumulates at the location of the defect, forming a visible indication or "magnetic particle indication." This indication is then examined by a trained inspector using ultraviolet light or other illumination to identify the precise location, size, and orientation of the defect.