

CIRCLE SYSTEMS, INC.

479 West Lincoln
P.O. Box 1228
Hinckley, IL 60520
Ph.: 815-286-3271
Fax: 815-286-3352
customerservice@circlesafe.com



TECHNICAL BULLETIN #178

MAGNETIC DUSTING POWDERS No. 60, 70 & 90 SERIES

The #60, #70 & #90 Series of Dusting Powders are magnetic powders used for *dry* method magnetic particle inspection. These powders are highly refined to detect minute discontinuities and slight subsurface discontinuities in rough surfaces such as bridges, billets, or forgings.

Properties

Particle Colors: The 60 Series (natural light only): #61 – Gray; #63 – Red; #66 – Yellow; #68 – Blue. The 70 Series (natural light and fluorescent light): #73 – Red in natural light and fluorescent red in black light; #75 – Yellow-green in natural light and fluorescent yellow-green in black light. The 90 Series (natural light and blue light): #93 – Red in natural light and fluorescent red in blue light.

Specific Gravity: 2.5 to 3.0 g/ml

Particle Size: Not less than 98% passage through U.S. Standard No. 80 mesh sieve (180 μm) as defined in AMS 3040. The typical range of particle sizes is from 15 to 160 μm , with an average particle size of 75 μm .

Sensitivity: The Dusting Powders (60, 70 & 90 Series) shows a minimum of 8 lines on an AISI Ketos tool steel ring (as defined in SAE AS5282), set on a 1-inch diameter copper bar, magnetized with 2500 A of direct current.

Particle Certification: Particles meet all relevant specifications, including but not limited to MIL-STD-1949, AMS 3040, MIL-STD-271, NAVSEA 250-1500-1, NTR-1E. Certification is included with each shipment.

Temperature Limits: 800°F Maximum – Dusting Powders #61, #66 and #68; 600°F Maximum – Dusting Powder #63; 250°F Maximum – Dusting Powders #73, #75 and #93

Directions for use

The 60 series, 70 series and 90 series Dusting Powders are applied to the part or structure with a powder spray bulb or powder blower. As the current is being applied, dust the Powder over the part. If excessive Powder is visible, gently blow the extra Powder off.

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