



<b>AEROSPACE MATERIAL SPECIFICATION</b>	<b>AMS3042™</b>	<b>REV. G</b>
	Issued 1974-03 Reaffirmed 2014-08 Revised 2022-08	
Superseding AMS3042F		
Magnetic Particles, Nonfluorescent Wet Method, Dry Powder		

## RATIONALE

AMS3042G is the result of a Five-Year Review and update of the specification. The revision adds classes of powder to define testing requirements based on type of powder (1.1, 1.3, 3.1, 3.3.6, 4.2.3, 4.2.4, 8.4), updates the version of foot-candles (3.3.2, 3.3.4.1) updates sensitivity testing (3.3.5), renames test procedures (3.3.5, 3.3.6), and requires all testing for acceptances thereby deleting periodic and preproduction tests (4.2, 4.3, 4.4, and 4.5).

### 1. SCOPE

#### 1.1 Form

This specification covers nonfluorescent, magnetic particles in the form of dry powders in the form of single or composite magnetic particle intended to be suspended in oil or conditioned water vehicle for use in the wet method, magnetic particle inspection.

#### 1.2 Application

These particles have been used typically as the inspection medium in a wet magnetic particle inspection system in accordance with ASTM E3024/E3024M, using either an oil or a conditioned water vehicle, but usage is not limited to such application.

#### 1.3 Classification

1.3.1 Magnetic particles covered by this specification are classified as follows:

Type 1 - Single particles (e.g., iron or iron oxide).

Type 2 - Composite particles (e.g., iron and pigment).

#### 1.4 Safety - Hazardous Materials

While the materials, methods, applications, and processes described or referenced in this specification may involve the use of hazardous materials, this specification does not address the hazards which may be involved in such use. It is the sole responsibility of the user to ensure familiarity with the safe and proper use of any hazardous materials and to take necessary precautionary measures to ensure the health and safety of all personnel involved.

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