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Standard Test Methods for Specific Gravity of Coating Powders¹

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1. Scope*

1.1 These test methods cover three procedures for determining the specific gravity (see definition) of coating powders, as follows:

TEST METHOD A—For Testing Coating Powders, Excluding Metallics
TEST METHOD B—For Tests Requiring Greater Precision than Test Method A,
Including Metallics, Using Helium Pycnometry
TEST METHOD C—For Theoretical Calculation Based on Raw Material Specific
Gravities

1.2 Test Method A can be used as a less expensive method with reduced accuracy for determining the specific gravity of coating powders, excluding metallics.

1.3 The ideal gas law forms the basis for all calculations used in the Test Method B determination of density of coating powders.

1.4 Test Method B includes procedures that provided acceptable results for samples analyzed during round robin testing.

1.5 Test Method B uses SI units as standard. State all numerical values in terms of SI units unless specific instrumentation software reports surface area using alternate units. Many instruments report density as g/cm³, instead of using SI units (kg/m³).

1.6 *This standard does not purport to address all of the safety concerns, if any, associated with its use. It is the responsibility of the user of this standard to establish appropriate safety and health practices and determine the applicability of regulatory limitations prior to use. For specific hazards statement see Section 6.*

2. Referenced Documents

2.1 ASTM Standards:

D 3924 Specification for Standard Environment for Conditioning and Testing Paint, Varnishes, Lacquers, and Related Materials²

¹ These test methods are under the jurisdiction of ASTM Committee D-1 D01 on Paint and Related Coatings, Materials, and Applications and are the direct responsibility of Subcommittee D01.51 on Powder Coatings.

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