Designation: D 912 – 81 (Reapproved 1999)

Standard Specification for Cuprous Oxide for Use in Antifouling Paints[1]

This standard is issued under the fixed designation D 912; the number immediately following the designation indicates the year of original adoption or, in the case of revision, the year of last revision. A number in parentheses indicates the year of last reapproval. A superscript epsilon (ε) indicates an editorial change since the last revision or reapproval.

This standard has been approved for use by agencies of the Department of Defense.

1. Scope

1.1 This specification covers cuprous oxide for use in antifouling paints.

2. Referenced Documents

2.1 *ASTM Standards:*

D 185 Test Methods for Coarse Particles in Pigments, Pastes, and Paints[2]

D 283 Test Methods for Chemical Analysis of Cuprous Oxide and Copper Pigments[2]

3. Composition

3.1 The pigment shall consist essentially of finely divided cuprous oxide and shall conform to the following requirements:

Cuprous oxide, min, %	97
Total copper, calculated as Cu, min, %	86
Total reducing power as Cu_2O, min, %	97
Metals other than copper, max, %	0.5
Combined chlorides, calculated as Cl, and sulfates, calculated as SO_4, max, %	0.5
Acetone-soluble matter, max, %	0.5
Stability: decrease in total reducing power after stability test, max, %	2.0
Coarse particles (total residue retained on a No. 325 (45-μm) sieve), max, %	0.5
Total nitric acid insoluble residue on a No. 200 (75-μm) sieve, max, %	0.1

4. Sampling

4.1 Two samples shall be taken at random from different packages from each lot, batch, day's pack, or other unit of production in a shipment. When no markings distinguishing between units of production appear, samples shall be taken from different packages in the ratio of two samples for each 10 000 lb (5000 kg), except that for shipments of less than 10 000 lb two samples shall be taken. At the option of the purchaser, the samples may be tested separately or after blending in equal quantities the samples from the same production unit to form a composite sample.

5. Test Methods

5.1 Tests shall be conducted in accordance with the following ASTM test methods. Test procedures not covered by ASTM test methods shall be mutually agreed upon between the purchaser and the seller.

5.2 *Coarse Particles*—Test Methods D 185.

5.3 *Cuprous Oxide Content, Total Copper, Reducing Power, Other Metals, Chlorides, Sulfates, Acetone, Soluble Matter, and Stability*—Methods D 283.

6. Keywords

6.1 antifouling paints; copper; cuprous oxide

[1] This specification is under the jurisdiction of ASTM Committee D-1 on Paint and Related Coatings, Materials, and Applications, and is the direct responsibility of Subcommittee D01.31 on Pigment Specifications.

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[2] *Annual Book of ASTM Standards*, Vol 06.03.