



Standard Test Method for Volatile Matter in Tricresyl Phosphate¹

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

1. Scope

1.1 This test method covers a procedure for determining the volatile matter in tricresyl phosphate.

1.2 *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 hazard statements, see Section 4.

1.3 For hazard information and guidance, see the supplier's Material Safety Data Sheet.

2. Significance and Use

2.1 This test method provides a measurement of volatile matter in tricresyl phosphate. The results of this measurement can be used for specification acceptance and determining performance in plasticizer use.

3. Apparatus

3.1 *Oven*, thermostatically controlled at $105 \pm 5^\circ\text{C}$.

3.2 *Petri Dish*, 100-mm diameter, or equivalent.

4. Hazards

4.1 Tricresyl phosphate is hazardous through inhalation or skin absorption. Take care in handling the material.

4.2 Ortho-isomer of tricresyl phosphate is considered toxic.

Trace amounts may be present in tricresyl phosphate specimens.

5. Procedure

5.1 Place a flat aluminum, glass, or porcelain dish in an oven at $105 \pm 5^\circ\text{C}$ for 1 h. Cool in a desiccator and weigh to 10 mg. Spread evenly over the bottom of the dish approximately 25 g of the sample. Weigh the dish and the specimen to 10 mg and place in an oven at $105 \pm 5^\circ\text{C}$ for 3 h. Cool the dish and specimen in a desiccator, and reweigh to 10 mg.

6. Calculation

6.1 Calculate the volatile matter in tricresyl phosphate as follows:

$$\text{Volatile matter, \%} = [(S - R)/S] \times 100 \quad (1)$$

where:

S = weight of specimen used, g, and

R = weight of specimen after heating, g.

7. Precision and Bias

7.1 *Precision*—Results should not differ from the mean by more than the following amounts:

	Within laboratory	Between laboratories
Volatile matter, weight %	0.05	0.1

7.2 *Bias*—Bias has not been determined for this test method.

8. Keywords

8.1 tricresyl phosphate; volatile matter

¹ This test method is under the jurisdiction of ASTM Committee D-1 on Paint and Related Coatings, Materials, and Applications and is the direct responsibility of Subcommittee D01.35 on Solvents, Plasticizers, and Chemical Intermediates.

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