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AMERICAN SOCIETY FOR TESTING AND MATERIALS
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Standard Specification for Methanol (Methyl Alcohol)¹

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1. Scope

1.1 This specification covers methanol (99.85 % grade).

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.*

1.3 For specific hazard information and guidance, see the supplier's Material Safety Data Sheet for materials listed in this specification.

2. Referenced Documents

2.1 ASTM Standards:

D 1296 Test Method for Odor of Volatile Solvents and Diluents²

D 1353 Test Method for Nonvolatile Matter in Volatile Solvents for Use in Paint, Varnish, Lacquer, and Related Products²

E 300 Practice for Sampling Industrial Chemicals³

E 346 Test Methods for Analysis of Methanol³

2.2 U.S. Fed. Specification:

PPP-C-2020 Federal Specification Packaging of Chemicals, Liquid, Dry, and Paste⁴

3. Properties

3.1 Methanol (99.85 % grade) shall conform to the following requirements:

Apparent specific

gravity:	
20/20°C	0.7920 to 0.7930
25/25°C	0.7883 to 0.7893
Color, Pt-Co, max	10
Distillation range, °C, max	1.0 (to include 64.6 ± 0.1)
Nonvolatile matter, mg/100 mL, max	5
Odor (see Note 1)	nonresidual
Water, weight %, max	0.10
Acidity (free acid as acetic acid), weight %, max	0.003, equivalent to 0.028 mg KOH per gram of material
Acetone, weight %, max	0.003
Hydrocarbons	to pass test
Sulfuric acid wash test	50
(carbonizable impurities)	
Color, Pt-Co, max	
Permanganate time, min	50

NOTE 1—Optional: Test for odor only when agreed upon as necessary between the purchaser and the supplier.

4. Sampling

4.1 Sample the material in accordance with Practice E 300.

5. Test Methods

5.1 The properties enumerated in this specification shall be determined in accordance with Method E 346 and the following methods:

5.1.1 *Nonvolatile Matter*—Test Method D 1353.

5.1.2 *Odor*—Test Method D 1296.

6. Packaging and Package Marking

6.1 Package size shall be agreed upon between the purchaser and the supplier.

6.2 Packaging shall conform to applicable carrier rules and regulations or when specified shall conform to U.S. Fed. Spec. PPP-C-2020.

7. Keywords

7.1 methanol; methyl alcohol

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² *Annual Book of ASTM Standards*, Vol 06.04.

³ *Annual Book of ASTM Standards*, Vol 15.05.

⁴ Available from Standardization Documents Order Desk, Bldg. 4 Section D, 700 Robbins Ave., Philadelphia, PA 19111-5094, Attn: NPODS.

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