



## Standard Specification for Methanol (Methyl Alcohol)<sup>1</sup>

This standard is issued under the fixed designation D 1152; 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.

### 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 Diluents<sup>2</sup>
- D 1353 Test Method for Nonvolatile Matter in Volatile Solvents for Use in Paint, Varnish, Lacquer, and Related Products<sup>2</sup>
- E 300 Practice for Sampling Industrial Chemicals<sup>3</sup>
- E 346 Test Methods for Analysis of Methanol<sup>4</sup>

#### 2.2 U.S. Fed. Specification:

- PPP-C-2020 Federal Specification Packaging of Chemicals, Liquid, Dry, and Paste<sup>5</sup>

### 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 (carbonizable impurities)	50
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 Test Methods 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

<sup>1</sup> This specification is under the jurisdiction of ASTM Committee D01 on Paint and Related Coatings, Materials, and Applications and is the direct responsibility of Subcommittee D01.35 on Solvents, Plasticizers and Chemical Intermediates.

Current edition approved Dec. 10, 1997. Published August 1998. Originally published as D 1152 – 31. Last previous edition D 1152 – 89 (1993)<sup>ε1</sup>.

<sup>2</sup> *Annual Book of ASTM Standards*, Vol 06.04.

<sup>3</sup> Discontinued; see 2001 *Annual Book of ASTM Standards*, Vol 15.05.

<sup>4</sup> *Annual Book of ASTM Standards*, Vol 15.05.

<sup>5</sup> Available from Standardization Documents Order Desk, Bldg. 4 Section D, 700 Robbins Ave., Philadelphia, PA 19111-5094, Attn: NPODS.



## D 1152

*ASTM International takes no position respecting the validity of any patent rights asserted in connection with any item mentioned in this standard. Users of this standard are expressly advised that determination of the validity of any such patent rights, and the risk of infringement of such rights, are entirely their own responsibility.*

*This standard is subject to revision at any time by the responsible technical committee and must be reviewed every five years and if not revised, either reapproved or withdrawn. Your comments are invited either for revision of this standard or for additional standards and should be addressed to ASTM International Headquarters. Your comments will receive careful consideration at a meeting of the responsible technical committee, which you may attend. If you feel that your comments have not received a fair hearing you should make your views known to the ASTM Committee on Standards, at the address shown below.*

*This standard is copyrighted by ASTM International, 100 Barr Harbor Drive, PO Box C700, West Conshohocken, PA 19428-2959, United States. Individual reprints (single or multiple copies) of this standard may be obtained by contacting ASTM at the above address or at 610-832-9585 (phone), 610-832-9555 (fax), or [service@astm.org](mailto:service@astm.org) (e-mail); or through the ASTM website ([www.astm.org](http://www.astm.org)).*