



Standard Specification for 2-Methoxyethanol¹

This standard is issued under the fixed designation D 3128; 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 2-methoxyethanol.
- 1.2 For hazard information and guidance, see the supplier's Material Safety Data Sheet for materials listed in this specification.
- 1.3 The following applies to all specified limits in this standard; for purposes of determining conformance with this standard, an observed value or a calculated value shall be rounded off "to the nearest unit" in the last right-hand digit used in expressing the specification limit, in accordance with the rounding-off method of Practice E 29.
- 1.4 *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 5.

2. Referenced Documents

- 2.1 *ASTM Standards:*
 - D 268 Guide for Sampling and Testing Volatile Solvents and Chemical Intermediates for Use in Paint and Related Coatings and Material²
 - D 1078 Test Method for Distillation Range of Volatile Organic Liquids²
 - D 1209 Test Method for Color of Clear Liquids (Platinum-Cobalt Scale)²
 - D 1364 Test Method for Water in Volatile Solvents (Karl Fischer Reagent Titration Method)²
 - D 1613 Test Method for Acidity in Volatile Solvents and Chemical Intermediates Used in Paint, Varnish, Lacquer, and Related Products²
 - D 4052 Test Method for Density and Relative Density of Liquids by Digital Density Meter³

- E 1 Specification for ASTM Thermometers⁴
- E 29 Practice for Using Significant Digits in Test Data to Determine Conformance with Specifications⁵
- E 300 Practice for Sampling Industrial Chemicals⁶
- 2.2 *U.S. Federal Standard:*
 - PPP-C-2020 Specification for Packaging of Chemicals, Liquid, Dry, and Paste⁷

3. Properties

3.1 2-Methoxyethanol shall conform to the following requirements:

Apparent specific gravity:	
20/20°C	0.963 to 0.967 or
25/25°C	0.960 to 0.964
Color, Pt-Co scale, max	15
Distillation range:	
Initial boiling point, °C, min	123
Dry point, °C, max	126
Water, weight, % max	0.2
Acidity (free acid as acetic acid), weight, % max	0.01, equivalent to 0.093 mg of KOH per gram of material

4. Sampling

4.1 The material shall be sampled in accordance with Practice E 300.

5. Test Methods

- 5.1 The properties enumerated in this specification shall be determined in accordance with the following ASTM methods:
 - 5.1.1 *Apparent Specific Gravity*—Determine the apparent specific gravity by any method that is accurate to the third decimal place, the temperature of both specimen and water being 20 or 25°C. See Specific Gravity section of Guide D 268 or Test Method D 4052.
 - 5.1.2 *Color*—Test Method D 1209.
 - 5.1.3 *Distillation Range*—Test Method D 1078, using an ASTM Solvents Distillation Thermometer 41C having a range from 98 to 152°C and conforming to the requirements in Specification E 1.

¹ 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 D 01.35 on Solvents, Plasticizer, and Chemical Intermediates.

Current edition approved July 10, 2002. Published September 2002. Originally published as D 3128 – 72. Last previous edition D 3128 – 97.

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

³ *Annual Book of ASTM Standards*, Vol 05.02.

⁴ *Annual Book of ASTM Standards*, Vol 14.03.

⁵ *Annual Book of ASTM Standards*, Vol 14.02.

⁶ Discontinued; see 2001 *Annual Book of ASTM Standards*, Vol 15.05.

⁷ Available from Standardization Documents Order Desk, DODSSP, Bldg. 4, Section D, 700 Robbins Ave., Philadelphia, PA 19111-5098



- 5.1.4 *Water*—Test Method D 1364.
- 5.1.5 *Acidity*—Test Method D 1613.

6. Packaging and Package Marking

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

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

7. Keywords

7.1 ethylene glycol monomethyl ether; 2-methoxyethanol

SUMMARY OF CHANGES

Committee D01.35 has identified the location of selected changes to this standard since the last issue (D 3128 - 97) that may impact the use of this standard.

- (1) Added reference to Practice E 29 in Scope section.
- (2) Added Practice E 29 to list of Referenced Documents.

- (3) Changed specs limits for apparent specific gravity in section 3.1.

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