



Designation: D 331 – 95 (Reapproved 1999)

Standard Specification for 2-Ethoxyethanol^{1, 2}

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1. Scope

- 1.1 This specification covers 2-ethoxyethanol.
- 1.2 For hazard information and guidance, see the supplier's Material Safety Data Sheets.

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 Materials³
 - D 1078 Test Method for Distillation Range of Volatile Organic Liquids³
 - D 1209 Test Method for Color of Clear Liquids (Platinum-Cobalt Scale)³
 - D 1353 Test Method for Nonvolatile Matter in Volatile Solvents for Use in Paint, Varnish, Lacquer, and Related Products³
 - D 1364 Test Method for Water in Volatile Solvents (Karl Fischer Reagent Titration Method)³
 - D 1613 Test Method for Acidity in Volatile Solvents and Chemical Intermediates Used in Paint, Varnish, Lacquer and Related Products³
 - D 4052 Test Method for Density and Relative Density of Liquids by Digital Density Meter⁴
 - E 1 Specification for ASTM Thermometers⁵
 - E 300 Practice for Sampling Industrial Chemicals⁶
- #### 2.2 U. S. Federal Specification:
- PPP-C-2020 Chemicals, Liquid, Dry, and Paste: Packaging of⁷

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 D01.35 on Solvents, Plasticizers, and Chemical Intermediates.

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² This compound is also known under the name ethylene glycol monoethyl ether.

³ Annual Book of ASTM Standards, Vol 06.04.

⁴ Annual Book of ASTM Standards, Vol 05.02.

⁵ Annual Book of ASTM Standards, Vol 14.03.

⁶ Annual Book of ASTM Standards, Vol 15.05.

⁷ Available from Standardization Documents Order Desk, Bldg.4 Section D, 700 Robbins Ave., Philadelphia, PA 19111-5094, Attn: NPODS.

3. Properties

3.1 2-Ethoxyethanol shall conform to the following requirements:

Apparent specific gravity:	
20/20°C	0.929 to 0.932
25/25°C	0.926 to 0.929
Color, Pt-Co scale, max	15
Distillation range, 760 mm Hg, °C as:	
Initial boiling point, min	134.0
Dry point, max	136.0
Nonvolatile matter, max, mg/100 mL	5
Water, max, weight %	0.1 ^A
Acidity (free acid as acetic acid), max, weight %	0.01 ^B

^A This quantitative water limit ensures that the material is miscible without turbidity with 19 volumes of 99 % heptane at 20°C.

^B Equivalent to 0.1 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 convenient method that is accurate to the third decimal place, the temperature of both specimen and water being 20°C or 25°C. See Methods 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 102C having a range from 123 to 177°C and conforming to the requirements of Specification E 1.

5.1.4 *Nonvolatile Matter*—Test Method D 1353.

5.1.5 *Water*—Test Method D 1364.

5.1.6 *Acidity*—Test Method D 1613.

6. Packaging and Package Marking

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