



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

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.

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

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.

7. Keywords

7.1 ethylene glycol monoethyl ether; 2-ethoxyethanol

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