



Standard Specification for 2-Ethoxyethyl Acetate (99 % Grade)¹

This standard is issued under the fixed designation D3728; 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 the properties of 99 % grade 2-ethoxyethyl acetate.

1.2 The values stated in SI units are to be regarded as standard. No other units of measurement are included in this standard.

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

1.4 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 E29.

1.5 *The text of this standard references notes and footnotes that provide explanatory material. These notes and footnotes (excluding those in tables and figures) shall not be considered as requirements of the standard.*

2. Referenced Documents

2.1 ASTM Standards:²

D268 Guide for Sampling and Testing Volatile Solvents and Chemical Intermediates for Use in Paint and Related Coatings and Material

D1078 Test Method for Distillation Range of Volatile Organic Liquids

D1209 Test Method for Color of Clear Liquids (Platinum-Cobalt Scale)

D1364 Test Method for Water in Volatile Solvents (Karl Fischer Reagent Titration Method)

D1613 Test Method for Acidity in Volatile Solvents and Chemical Intermediates Used in Paint, Varnish, Lacquer,

and Related Products

D3545 Test Method for Alcohol Content and Purity of Acetate Esters by Gas Chromatography

D5386 Test Method for Color of Liquids Using Tristimulus Colorimetry

E29 Practice for Using Significant Digits in Test Data to Determine Conformance with Specifications

E300 Practice for Sampling Industrial Chemicals

2.2 U.S. Federal Specification:³

PPP-C-2020 Chemicals, Liquid, Dry, and Paste: Packaging of

3. Properties

3.1 2-Ethoxyethyl acetate (99 % grade) shall conform to the following requirements:

Purity weight %, min	99.0
Alcohol (as 2-ethoxy ethanol) weight %, max	0.5
Apparent specific gravity, 20/20°C	0.973 to 0.976
	or
25/25°C	0.969 to 0.972
Distillation range, °C (see Note 1)	
Initial boiling point, min	150
Dry point, max	160
Acidity as acetic acid, weight %, max	0.02, equivalent to 0.19 mg of KOH per gram of sample
Water, weight %, max	0.10
Color Pt-Co scale, max (Note 2)	15

NOTE 1—Optional as agreed upon between the buyer and the seller.

NOTE 2—Instrumental Pt-Co color determined by Test Method D5386 have been shown to have no statistically significant difference from Pt-Co color determined by Test Method D1209. However, it is not known whether 2-ethoxyethyl acetate was part of the sample set included in the interlaboratory study.

4. Sampling

4.1 The material shall be sampled in accordance with Practice E300.

5. Test Methods

5.1 The properties enumerated in this specification shall be determined in accordance with the following ASTM test methods:

³ Available from Standardization Documents Order Desk, DODSSP, Bldg. 4, Section D, 700 Robbins Ave., Philadelphia, PA 19111-5098, <http://dodssp.daps.dla.mil>.

*A Summary of Changes section appears at the end of this standard

5.1.1 *Purity and Alcohol Content*—Test Method **D3545**.

5.1.2 *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 or 25°C. See Specific Gravity section of Guide **D268**.

5.1.3 *Distillation Range*—Test Method **D1078**, using a temperature measuring device having a range of 123 to 177°C and a resolution of 0.1°C.

5.1.4 *Acidity*—Test Method **D1613**.

5.1.5 *Water*—Test Method **D1364**.

5.1.6 *Color*—Test Method **D1209** (see **Note 2**).

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 Fed. Spec. PPP-C-2020.

7. Keywords

7.1 2-ethoxyethyl acetate

SUMMARY OF CHANGES

Committee D01.35 has identified the location of selected changes to this standard since the last issue (D3728 - 03) that may impact the use of this standard. (Approved November 1, 2008.)

(1) Added new **Note 2** to **3.1**.

(2) Added Test Method **D5386** to list of Referenced Documents.

(3) Referenced new **Note 2** in **5.1.6**.

(4) Modified **5.1.3**.

(5) Removed Specification E1 from **2.1**.

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