



Designation: D 3728 – 9903

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

This standard is issued under the fixed designation D 3728; 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 the standard. The values given in parentheses are for information only.

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

1.34 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.

1.5 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.

¹ This specification is under the jurisdiction of ASTM Committee D-1 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 June 10, 1999; Oct. 1, 2003. Published August 1999; October 2003. Originally published as D 3728 – 79; approved in 1979. Last previous edition approved in 1999 as D 3728 – 979.

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

2. Referenced Documents

2.1 ASTM Standards:²

- D 268 Guide for Sampling and Testing Volatile Solvents and Chemical Intermediates for Use in Paint and Related Coatings and Material
- D 1078 Test Method for Distillation Range of Volatile Organic Liquids
- D 1209 Test Method for Color of Clear Liquids (Platinum-Cobalt Scale)
- D 1364 Test Method for Water in Volatile Solvents (Karl Fischer Reagent Titration Method)
- D 1613 Test Method for Acidity in Volatile Solvents and Chemical Intermediates Used in Paint, Varnish, Lacquer and Related Products
- D 3545 Test Method for Alcohol Content and Purity of Acetate Esters by Gas Chromatography
- E 1 Specification for ASTM Thermometers
- E 30029 Practice for Using Significant Digits in Test Data to Determine Conformance with Specifications
- E 300 Practice for Sampling Industrial Chemicals

2.2 U.S. Federal Specification:

- PPP-C-2020 Chemicals, Liquid, Dry, and Paste: Packaging of³

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, <u>–20/20°C</u>	0.973 to 0.976
<u>–25/25°C</u>	<u>0.973 to 0.976</u>
<u>20/20°C</u>	<u>0.969 to 0.972</u>
<u>25/25°C</u>	<u>or</u>
Distillation range, °C (see Note 1)	0.969 to 0.972
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	15

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

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 test methods:

5.1.1 *Purity and Alcohol Content*—Test Method D 3545.

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 ~~Methods~~ Guide D 268.

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 in Specification E 1.

5.1.4 *Acidity*—Test Method D 1613.

5.1.5 *Water*—Test Method D 1364.

5.1.6 *Color*—Test Method D 1209.

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

² For referenced ASTM standards, visit the ASTM website, www.astm.org, or contact ASTM Customer Service at service@astm.org. For *Annual Book of ASTM Standards* volume information, refer to the standard's Document Summary page on the ASTM website.

Annual Book of ASTM Standards, Vol 06.04.

³ Available from Standardization Documents Order Desk, DODSSP, Bldg. 4, Section D, 700 Robbins Ave., Philadelphia, PA 19111-5098

SUMMARY OF CHANGES

Committee D01.35 has identified the location of selected changes to this standard since the last issue (D 3728 - 99) 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 3.1.

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 (e-mail); or through the ASTM website (www.astm.org).