~~Designation:D3728–03~~ Designation: D 3728 – 08

# 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.

~~1.2The values stated in SI units are to be regarded as the standard. The values given in parentheses are for information only.~~

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 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.*

## 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

~~E1Specification for ASTM Thermometers~~ D 5386 Test Method for Color of Liquids Using Tristimulus Colorimetry

E 29 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:*[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 |

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

Current edition approved ~~Oct.~~Nov. 1, ~~2003.~~2008. Published ~~October 2003.~~December 2008. Originally approved in 1979. Last previous edition approved in ~~1999~~2003 as ~~D3728–99.~~D 3728 – 03.

[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.

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

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

| | |
|---|---|
| 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~~ |
| Color Pt-Co scale, max (Note 2) | 15 |

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

NOTE 2—Instrumental Pt-Co color determined by Test Method D 5386 have been shown to have no statistically significant difference from Pt-Co color determined by Test Method D 1209. 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 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 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 E1.~~ , 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 D 1613.

5.1.5 *Water*—Test Method D 1364.

5.1.6 *Color*~~—Test Method D1209.~~ —Test Method D 1209 (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

~~7.12–ethoxyethyl acetate~~

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 (D3728-99) that may impact the use of this standard.~~

~~*(1)* Added reference to Practice E29 in Scope section.~~

~~*(2)* Added Practice E29 to list of Referenced Documents.~~

~~*(3)* Changed specs limits for apparent specific gravity in~~

Committee D01.35 has identified the location of selected changes to this standard since the last issue (D 3728 - 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 D 5386 to list of Referenced Documents.

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

(*4*) Modified 5.1.3.

(*5*) Removed Specification E 1 from 2.1.