



Designation: D 1718 – 9803

## Standard Specification for Isobutyl Acetate (95 % Grade)<sup>1</sup>

This standard is issued under the fixed designation D 1718; 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 ( $\epsilon$ ) indicates an editorial change since the last revision or reapproval.

*This standard has been approved for use by agencies of the Department of Defense.*

### 1. Scope\*

1.1 This specification covers isobutyl acetate (95 % grade).

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 material 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.

<sup>1</sup> 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 .

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

## 2. Referenced Documents

### 2.1 ASTM Standards:<sup>2</sup>

- D 268 Guide for Sampling and Testing Volatile Solvents and Chemical Intermediates for Use in Paint and Related Coatings and Materials
- D 1078 Test Method for Distillation Range of Volatile Organic Liquids
- D 1209 Test Method for Color of Clear Liquids (Platinum-Cobalt Scale)
- D 1353 Test Method for Nonvolatile Matter in Volatile Solvents for Use in Paint, Varnish, Lacquer, and Related Products
- D 1364 Test Method for Water in Volatile Solvents (Karl Fischer Reagent Titration Method)
- D 1476 Test Method for Heptane Miscibility of Lacquer Solvents
- 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
- D 4052 Test Method for Density and Relative Density of Liquids by Digital Density Meter
- 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 of<sup>3</sup>

## 3. Properties

### 3.1 Isobutyl acetate shall conform to the following requirements:<sup>4</sup>

Apparent specific gravity:	
20/20°C	0.868 to 0.873
25/25°C	<u>          </u> or 0.864 to 0.869
Color Pt-Co units, max	10
Distillation, °C at 760 mmHg	
Initial boiling point, min	112.0
Dry point, max	119.0
Nonvolatile matter mg/100 mL, max	5
Water, wt %, max <sup>7</sup>	0.1
Acidity (free acid as acetic), wt %, max	0.01
Purity, wt %, min	95

## 4. Sampling

- 4.1 The material shall be sampled in accordance with Practice E 300.

## 5. Test Method

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. See Guide 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 having a range from 98 to 152°C, and conforming to the requirements for thermometer 41C, as prescribed in Specification E 1.

5.1.4 *Nonvolatile Matter*—Test Method D 1353.

5.1.5 *Water*—Test Method D 1364 and Method D 1476.

5.1.6 *Acidity*—Test Method D 1613.

5.1.7 *Purity*—Test Method D 3545.

## 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.

<sup>2</sup> For referenced ASTM standards, visit the ASTM website, [www.astm.org](http://www.astm.org), or contact ASTM Customer Service at [service@astm.org](mailto: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.

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

*Annual Book*

<sup>4</sup> In some cases, Test Method D 1476 may serve as a useful alternative method to determine the presence of ASTM Standards, Vol 05.02, water. Because it is a qualitative test, its use would require agreement between user and supplier.

## 7. Keywords

7.1 ester; isobutyl acetate

### SUMMARY OF CHANGES

Committee D01.35 has identified the location of selected changes to this standard since the last issue (D 1718 - 98) 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.
- (4) Changed Footnote 7.

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