



Standard Specification for Isobutyl Acetate (95 % Grade)¹

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

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 Materials²
- D 1078 Test Method for Distillation Range of Volatile Organic Liquids²
- D 1209 Test Method for Color of Clear Liquids (Platinum-Cobalt Scale)²
- D 1353 Test Method for Nonvolatile Matter in Volatile Solvents for Use in Paint, Varnish, Lacquer, and Related Products²
- D 1364 Test Method for Water in Volatile Solvents (Karl Fischer Reagent Titration Method)²
- D 1476 Test Method for Heptane Miscibility of Laquer Solvents²
- D 1613 Test Method for Acidity in Volatile Solvents and Chemical Intermediates Used in Paint, Varnish, Lacquer, and Related Products²
- D 3545 Test Method for Alcohol Content and Purity of Acetate Esters by Gas Chromatography²
- D 4052 Test Method for Density and Relative Density of Liquids by Digital Density Meter³
- E 1 Specification for ASTM Thermometers⁴
- E 300 Practice for Sampling Industrial Chemicals⁵

2.2 U.S. Federal Specification:

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 *Annual Book of ASTM Standards*, Vol 06.04.

³ *Annual Book of ASTM Standards*, Vol 05.02.

⁴ *Annual Book of ASTM Standards*, Vol 14.03.

⁵ *Annual Book of ASTM Standards*, Vol 15.05.

PPP-C-2020 Chemicals, Liquid, Dry, and Paste: Packaging of⁶

3. Properties

3.1 Isobutyl acetate shall conform to the following requirements:⁷

Apparent specific gravity:	
20/20°C	0.868 to 0.873
25/25°C	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 ⁷	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 Available from Standardization Documents Order Desk, Bldg. 4 Section D, 700 Robbins Ave., Philadelphia, PA 19111-5094.

⁷ This quantitative water limit ensures that the material is miscible without turbidity with 19 volumes of 99 % heptane at 20°C.



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 ester; isobutyl acetate

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