



Designation: D 4615 – 95 (Reapproved 2001)

## Standard Specification for *n*-Butyl Acetate (All Grades)<sup>1</sup>

This standard is issued under the fixed designation D 4615; 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.

### 1. Scope

1.1 This specification covers the various grades of *n*-butyl acetate suitable for use as solvents in paint and related coatings.

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 Materials<sup>2</sup>

D 891 Test Methods for Specific Gravity, Apparent, of Liquid Industrial Chemicals<sup>3</sup>

D 1078 Test Method for Distillation Range of Volatile Organic Liquids<sup>2</sup>

D 1209 Test Method for Color of Clear Liquids (Platinum-Cobalt Scale)<sup>2</sup>

D 1296 Test Method for Odor of Volatile Solvents and Diluents<sup>2</sup>

D 1353 Test Method for Nonvolatile Matter in Volatile Solvents for Use in Paint, Varnish, Lacquer, and Related Products<sup>2</sup>

D 1364 Test Method for Water in Volatile Solvents (Karl Fischer Reagent Titration Method)<sup>2</sup>

D 1613 Test Method for Acidity in Volatile Solvents and Chemical Intermediates Used in Paint, Varnish, Lacquer, and Related Products<sup>2</sup>

D 3545 Test Method for Alcohol Content and Purity of Acetate Esters by Gas Chromatography<sup>2</sup>

D 4052 Test Method for Density and Relative Density of Liquid by Digital Density Meter<sup>4</sup>

E 1 Specification for ASTM Thermometers<sup>5</sup>

E 300 Practice for Sampling Industrial Chemicals<sup>6</sup>

2.2 U.S. Federal Specification:

PPP-C-2020 Chemicals, Liquid, Dry, and Paste: Packaging of<sup>7</sup>

### 3. Properties

3.1 *n*-Butyl acetate shall conform to one of the requirements of one of the grades in Table 1.

### 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 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 Guide D 268, or Test Methods D 891 or D 4052.)

5.1.3 *Distillation Range*—Test Method D 1078, using an ASTM Solvents Distillation Thermometer 41C having a range from 98 to 152°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.

5.1.7 *Nonvolatile Matter*—Test Method D 1353.

5.1.8 *Odor*—Test Method D 1296.

### 6. Packaging and Package Marking

6.1 Package size to be agreed upon between the purchaser and 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 butyl acetate; ester; solvent

<sup>1</sup> 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.

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<sup>2</sup> *Annual Book of ASTM Standards*, Vol 06.04.

<sup>3</sup> *Annual Book of ASTM Standards*, Vol 15.05.

<sup>4</sup> *Annual Book of ASTM Standards*, Vol 05.02.

<sup>5</sup> *Annual Book of ASTM Standards*, Vol 14.03.

<sup>6</sup> *Annual Book of ASTM Standards*, Vol 15.05.

<sup>7</sup> Available from Standardization Documents Order Desk, Bldg. 4 Section D, 700 Robbins Ave., Philadelphia, PA 19111-5094.