Designation: D 3540 – 90 (Reapproved 2001)

Standard Specification for Primary Amyl Acetate, Synthetic (98 % Grade)[1]

This standard is issued under the fixed designation D 3540; 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 synthetic primary amyl acetate (98 % 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 Material[2]

D 1078 Test Method for Distillation Range of Volatile Organic Liquids[2]

D 1209 Test Method for Color of Clear Liquids (Platinum-Cobalt Scale)[2]

D 1364 Test Method for Water in Volatile Solvents (Karl Fischer Reagent Titration Method)[2]

D 1476 Test Method for Heptane Miscibility of Lacquer Solvents[2]

D 1613 Test Method for Acidity in Volatile Solvents and Chemical Intermediates Used in Paint, Varnish, Lacquer, and Related Products[2]

D 1617 Test Method for Ester Value of Lacquer Solvents and Thinners[2]

D 4052 Test Method for Density and Relative Density of Liquids by Digital Density Meter[3]

E 1 Specification for ASTM Thermometers[4]

E 300 Practice for Sampling Industrial Chemicals[5]

2.2 *U.S. Federal Specification:*

PPP-C-2020 Chemicals, Liquid, Dry, and Paste: Packaging of[6]

3. Properties

3.1 Primary amyl acetate shall conform to the following requirements: [7]

Apparent specific gravity:	
20/20°C	0.874 to 0.879
25/25°C	0.870 to 0.875
Color Pt-Co units, max	15
Distillation, °C at 760 mmHg	
Initial boiling point, min	142
Dry point, max	152
Water, wt %, max[7]	0.2
Acidity (free acid as acetic acid), wt %, max	0.01
Ester value, wt %, min	98.0

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 *Apparent Specific Gravity*—Determine the apparent specific gravity by any convenient method that is accurate to the third decimal place, the temperature of both the specimen and water being either 20 or 25°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 102C having a range from 123 to 177°C and conforming to the requirements in Specification E 1.

5.1.4 *Water*—Test Methods D 1364 and D 1476.

5.1.5 *Acidity*—Test Method D 1613.

5.1.6 *Ester Value*—Test Method D 1617.

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.

[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.

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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] Discontinued; see *2001 Annual Book of ASTM Standards*, Vol 15.05.

[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 heptane at 20°C.

7. Keywords

7.1 amyl acetate; ester; solvent