



Designation: D5137 – 07 (Reapproved 2021)

Standard Specification for Hexyl Acetate¹

This standard is issued under the fixed designation D5137; 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 hexyl acetate, which is used as an active tail high boiling solvent in lacquers, automotive coatings, maintenance paints, and other related coatings.

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 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 E29.

1.4 For specific hazard information and guidance, see the supplier’s Material Safety Data Sheet.

1.5 *This international standard was developed in accordance with internationally recognized principles on standardization established in the Decision on Principles for the Development of International Standards, Guides and Recommendations issued by the World Trade Organization Technical Barriers to Trade (TBT) Committee.*

2. Referenced Documents

2.1 ASTM Standards:²

D268 Guide for Sampling and Testing Volatile Solvents and Chemical Intermediates for Use in Paint and Related Coatings and Material (Withdrawn 2021)³

D1078 Test Method for Distillation Range of Volatile Organic Liquids

D1209 Test Method for Color of Clear Liquids (Platinum-Cobalt Scale)

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 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 The last approved version of this historical standard is referenced on www.astm.org.

D1364 Test Method for Water in Volatile Solvents (Karl Fischer Reagent Titration Method) (Withdrawn 2021)³

D1476 Test Method for Heptane Miscibility of Lacquer Solvents (Withdrawn 2021)³

D1613 Test Method for Acidity in Volatile Solvents and Chemical Intermediates Used in Paint, Varnish, Lacquer, and Related Products

D1617 Test Method for Ester Value of Solvents and Thinners (Withdrawn 2021)³

D4052 Test Method for Density, Relative Density, and API Gravity of Liquids by Digital Density Meter

D5386 Test Method for Color of Liquids Using Tristimulus Colorimetry

E29 Practice for Using Significant Digits in Test Data to Determine Conformance with Specifications

E300 Practice for Sampling Industrial Chemicals

2.2 U.S. Federal Specification:

PPP-C-2020 Chemicals, Liquid, Dry, and Paste: Packaging of ⁴

3. Properties

3.1 Hexyl acetate shall conform to the following requirements:⁵

Acidity (free acid as acetic acid) weight %, max	0.02
Apparent specific gravity	
20/20 °C	0.872 to 0.876
	or
25/25 °C	0.868 to 0.872
Color, Pt-Co units, max (Note 1)	15
Distillation range, °C	
Initial boiling point, min	162
95 % point, max	176
Electrical Resistivity Ransburg megohms, min	20
Ester value, weight, % min	99.0
Water content, weight %, max ⁵	0.05

NOTE 1—Instrumental Pt-Co color determined by Test Method D5386 has been shown to have no statistically significant difference from Pt-Co color determined by Test Method D1209. However, it is not known whether hexyl acetate was part of the sample set included in the interlaboratory study.

⁴ Available from Standardization Documents Order Desk, DODSSP, Bldg. 4, Section D, 700 Robbins Ave., Philadelphia, PA 19111-5098, http://www.dodssp.daps.mil.

⁵ This quantitative water limit ensures that the material is miscible without turbidity with 19 volumes of heptane at 20 °C.