Designation: D 5137 – 95

AMERICAN SOCIETY FOR TESTING AND MATERIALS
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# Standard Specification for Hexyl Acetate[1]

This standard is issued under the fixed designation D 5137; 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 For specific hazard information and guidance, see the supplier's Material Safety Data Sheet.

## 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[2]

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

D 1296 Test Method for Odor of Volatile Solvents and Diluents[2]

D 1364 Test Method for Water in Volatile Solvents (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 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 Hexyl acetate shall conform to the following requirements:[7]

| | |
|---|---|
| Acidity (free acid as acetic acid) weight %, max | 0.02 |
| Apparent specific gravity | |
| 20/20°C | 0.872 to 0.876 |
| 25/25°C | 0.868 to 0.872 |
| Color, Pt-Co units, max | 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[7] | 0.05 |

## 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 Acidity—Test Method D 1613.

5.1.2 *Apparent Specific Gravity*—Determine the apparent specific gravity by any convenient method that is accurate to the third decimal place, the termination of both the specimen and water being 20°C. See Guide D 268 or Test Method D 4052.

5.1.3 *Color*—Method D 1209.

5.1.4 *Distillation Range*—Test Method D 1078 using an ASTM Solvents Distillation Thermometer 103C having a range from 148 to 202°C and conforming to the requirements in Specification E 1.

5.1.5 *Electrical Resistivity*—An ASTM Test Method utilizing a Ransburg Electrical Resistivity meter is under development.

5.1.6 *Ester Value*—Test Method D 1617. Use specimen size, reaction conditions, and ester factor as specified for methyl amyl acetate.

5.1.7 *Water Content*—Test Methods D 1364 and D 1476.

## 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

[1] These specifications are 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.

Current edition approved Feb. 15, 1995. Published April 1995. Originally published as D 5137 – 90. Last previous edition D 5137 – 90.

[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.

[6] 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.

regulations, or when specified shall conform to Federal Spec. PPP-C-2020.

## 7. Keywords

7.1 ester; hexyl acetate; solvent