Designation: D4360 – 11

Standard Specification for Methyl *n*-Amyl Ketone[1]

This standard is issued under the fixed designation D4360; 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 methyl *n*-amyl ketone (98 % grade) for use in paint, varnish, lacquer, and related products.

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

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.

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

D1078 Test Method for Distillation Range of Volatile Organic Liquids

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

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

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

D3893 Test Method for Purity of Methyl Amyl Ketone and Methyl Isoamyl Ketone by Gas Chromatography

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 *Federal Specification:*

PPP-C-2020 Chemicals, Liquid, Dry, and Paste: Packaging of [3]

3. Properties

3.1 Methyl *n*-amyl ketone shall conform to the following requirements:

Apparent specific gravity	
20/20°C	0.815–0.818
or	or
25/25°C	0.812–0.815
Color, Pt-Co scale, max (Note 1)	10
Distillation, 760 mm Hg, °C	
Initial boiling point, min	147
Dry point, max	153.5
Water, max, weight %	0.1
Acidity, as acetic acid, max, weight %	0.02
Purity, min, weight %	98

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

4. Sampling

4.1 The material shall be sampled in accordance with Practice E300.

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 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 Test Method D4052 and the Specific Gravity section of Guide D268.)

5.1.2 *Color*—Test Method D1209.

5.1.3 *Distillation Range*—Test Method D1078, using a temperature measuring device having a range of 95 to 255°C and a resolution of 0.1°C.

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

*A Summary of Changes section appears at the end of this standard

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5.1.4 *Water*—Test Method D1364.
5.1.5 *Acidity*—Test Method D1613.
5.1.6 *Purity*—Test Method D3893.

6. Packaging and Package Marking

6.1 Package size to 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 Specification PPP-C-2020.

7. Keywords

7.1 2-heptanone; MAK; methyl *n*-amyl ketone; solvents

SUMMARY OF CHANGES

Committee D01 has identified the location of selected changes to this standard since the last issue (D4360 – 03) that may impact the use of this standard. (Approved November 1, 2011.)

(1) Added a new Note 1 in table in 3.1.
(2) Added Test Method D5386 to the list of Referenced Documents.
(3) Revised 5.1.3.
(4) Removed Specification E1 from 2.1.

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