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Standard Specification for Methyl *n*-Amyl Ketone¹

This standard is issued under the fixed designation D 4360; 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 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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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 E 29.

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 Materials²

D 1078 Test Method for Distillation Range of Volatile Organic Liquids²

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 1613 Test Method for Acidity in Volatile Solvents and Chemical Intermediates Used in Paint, Varnish, Lacquer, and Related Products²

D 3893 Test Method for Purity of Methyl Amyl Ketone and Methyl Isoamyl Ketone by Gas Chromatography²

D 4052 Test Method for Density and Relative Density of Liquids by Digital Density Meter³

E 1 Specification for ASTM Thermometers⁴

E 29 Practice for Using Significant Digits in Test Data to Determine Conformance with Specifications⁵

E 300 Practice for Sampling Industrial Chemicals⁶

2.2 Federal Specification:

PPP-C-2020 Chemicals, Liquid, Dry, and Paste: Packaging of⁷

3. Properties

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

Apparent specific gravity	
—20/20°C	0.815–0.818
—25/25°C	0.812–0.815
20/20°C	0.815–0.818
or	or
25/25°C	0.812–0.815
Color, Pt-Co scale, max	10
Distillation, 760 mm Hg, °C	

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, 14.02.

⁶ Available from Standardization Documents Order Desk, Bldg. 4 Section D, 700 Robbins Ave., Philadelphia, PA 19111-5094, Attn: NPODS

⁷ Annual Book of ASTM Standards, Vol 15.05.

⁸ Available from Standardization Documents Order Desk, DODSSP, Bldg. 4, Section D, 700 Robbins Ave., Philadelphia, PA 19111-5098

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

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 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 D 4052 and the Specific Gravity section of Guide D 268.)

5.1.2 *Color*—Test Method D 1209.

5.1.3 *Distillation Range*—Test Method D 1078, using an ASTM Solvents Distillation Thermometer 42C having a range from 95 to 255°C and conforming to the requirements of Specification E 1.

5.1.4 *Water*—Test Method D 1364.

5.1.5 *Acidity*—Test Method D 1613.

5.1.6 *Purity*—Test Method D 3893.

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 (D 4360 - 90 (1999)) that may impact the use of this standard.

(1) Added Practice E 29 on significant digits to the scope.

(2) Added Practice E 29 to the Referenced Documents section.

(3) Inserted the word “or” between the apparent specific gravity specifications to allow the manufacturer to select just one of the two specified temperatures, 20 or 25°C for testing, rather than requiring testing at both temperatures.

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