



Standard Specification for Methyl Isobutyl Carbinol¹

This standard is issued under the fixed designation D2635; 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 isobutyl carbinol² for use in paint, varnish, lacquer, and related products.

1.2 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.

1.3 The values stated in SI units are to be regarded as standard. No other units of measurement are included in this standard.

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

2. Referenced Documents

2.1 ASTM Standards:³

D268 Guide for Sampling and Testing Volatile Solvents and Chemical Intermediates for Use in Paint and Related Coatings and Material

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

D1353 Test Method for Nonvolatile Matter in Volatile Solvents for Use in Paint, Varnish, Lacquer, and Related Products

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

D3329 Test Method for Purity of Methyl Isobutyl 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 U.S. Federal Specification:⁴

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

3. Properties

3.1 Methyl isobutyl carbinol shall conform to the following requirements:

Apparent specific gravity 20/20°C	0.806 to 0.809 or 0.803 to 0.806
25/25°C	0.803 to 0.806
Color, Pt-Co units, max (Note 1)	10
Water, wt %, max	0.1
Acidity (free acid as acetic acid), wt %, max	0.005
Nonvolatile matter, mg/100 mL, max	5
Purity, wt %, min	98.0

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 methyl isobutyl carbinol was part of the sample set included in the interlaboratory study.

4. Test Methods

4.1 The material shall be sampled in accordance with Practice E300 and the properties enumerated in this specification shall be determined in accordance with the following ASTM test methods:

4.1.1 *Apparent Specific Gravity*—Determine the apparent specific gravity by any method that is accurate to the third decimal place, the temperature of both specimen and water being 20°C or 25°C. (See Guide D268 and Test Method D4052.)

4.1.2 *Color*—Test Method D1209 (see Note 1).

4.1.3 *Water*—Test Method D1364.

4.1.4 *Acidity*—Test Method D1613.

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.

Current edition approved July 1, 2012. Published September 2012. Originally approved in 1967. Last previous edition approved in 2007 as D2635 – 07. DOI: 10.1520/D2635-07R12.

² This compound is also known as 4-methyl-pentanol-2 and methyl amyl alcohol.

³ 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.

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

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

4.1.5 *Nonvolatile Matter*—Test Method **D1353**.

4.1.6 *Purity*—Test Method **D3329**.

NOTE 2—The following distillation properties are given for information only and are not part of the specification. The initial boiling point is 130.0°C and the dry point is 133.0°C at 760 mm Hg.

5. Packaging and Package Marking

5.1 Package size shall be agreed upon by the purchaser and the supplier.

5.2 Packaging shall conform to applicable carrier rules and regulations or, when specified, shall conform to Fed. Spec. PPP-C-2020.

6. Keywords

6.1 methyl isobutyl carbinol

SUMMARY OF CHANGES

Committee D01.35 has identified the location of selected changes to this standard since the last issue (D2635 - 01) that may impact the use of this standard. (Approved June 1, 2007.)

(1) Added reference to Practice **E29** in Scope section.

(2) Added Practice **E29** to list of Referenced Documents.

(3) Changed specs limits for apparent specific gravity in **3.1**.

(4) Added new **Note 1** to **3.1**.

(5) Added Test Method **D5386** to list of Referenced Documents.

(6) Referenced new **Note 1** in **4.1.2**.

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