



Standard Specification for Methyl Isobutyl Carbinol¹

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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	10
Color, Pt-Co units, max (Note 1)	0.1
Water, wt %, max	0.005
Acidity (free acid as acetic acid), wt %, max	5
Nonvolatile matter, mg/100 mL, max	98.0
Purity, wt %, min	

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.

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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