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Standard Specification for Methyl Isobutyl Carbinol¹

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^{ε1} NOTE—Editorial changes made throughout in January 1996.

1. Scope

1.1 This specification covers methyl isobutyl carbinol² for use in paint, varnish, lacquer, and related products.

1.2 For specific hazard information and guidance, consult 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 Materials³

D 1078 Test Method for Distillation Range of Volatile Organic Liquids³

D 1209 Test Method for Color of Clear Liquids (Platinum-Cobalt Scale)³

D 1353 Test Method for Nonvolatile Matter in Volatile Solvents for Use in Paint, Varnish, Lacquer, and Related Products³

D 1364 Test Method for Water in Volatile Solvents (Karl Fischer Reagent Titration Method)³

D 1613 Test Method for Acidity in Volatile Solvents and Chemical Intermediates Used in Paint, Varnish, Lacquer, and Related Products³

D 3329 Test Method for Purity of Methyl Isobutyl Ketone by Gas Chromatography³

D 4052 Test Method for Density and Relative Density of Liquids by Digital Density Meter⁴

E 1 Specification for ASTM Thermometers⁵

E 300 Practice for Sampling Industrial Chemicals⁶

2.2 U.S. Federal Specification:

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

3. Properties

3.1 Methyl isobutyl carbinol shall conform to the following requirements:

Apparent specific gravity	
20/20°C	0.806 to 0.809
25/25°C	0.803 to 0.806
Color, Pt-Co units, max	10
Distillation, 760 mm Hg	
Initial boiling point, °C, min	130.0
Dry point, °C, max	133.0
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

4. Test Methods

4.1 The material shall be sampled in accordance with Practice E 300 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 D 268 and Test Method D 4052.)

4.1.2 *Color*—Test Method D 1209.

4.1.3 *Distillation Range*—Test Method D 1078 using an ASTM Solvents Distillation Thermometer 41C having a range from 98 to 152°C, and conforming to the requirements in Specification E 1.

4.1.4 *Water*—Test Method D 1364.

4.1.5 *Acidity*—Test Method D 1613.

4.1.6 *Nonvolatile Matter*—Test Method D 1353.

4.1.7 *Purity*—Test Method D 3329.

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.

⁷ Available from Standardization Documents Order Desk, Bldg. 4 Section D, 700 Robbins Ave., Philadelphia, PA 19111-5094. Attn: NPODS.

¹ This specification is 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.

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

³ *Annual Book of ASTM Standards*, Vol 06.04.

⁴ *Annual Book of ASTM Standards*, Vol 05.02.

⁵ *Annual Book of ASTM Standards*, Vol 14.03.

⁶ *Annual Book of ASTM Standards*, Vol 15.05.

6. Keywords

6.1 methyl isobutyl carbinol

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