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AMERICAN SOCIETY FOR TESTING AND MATERIALS
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# Standard Specification for Methyl Isoamyl Ketone[1,2]

This standard is issued under the fixed designation D 2917; 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.

*This standard has been approved for use by agencies of the Department of Defense.*

## 1. Scope

1.1 This specification covers methyl isoamyl 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.

## 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 Materials[3]

D 1078 Test Method for Distillation Range of Volatile Organic Liquids[3]

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

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 Products[3]

D 3893 Test Method for Purity of Methyl Amyl Ketone and Methyl Isoamyl Ketone by Gas Chromatography[3]

D 4052 Test Method for Density and Relative Density of Liquids by Digital Density Meter[4]

E 1 Specification for ASTM Thermometers[5]

E 300 Practice for Sampling Industrial Chemicals[6]

2.2 *U.S. Federal Specification:*

PPP-C-2020 Chemicals, Liquid, Dry, and Paste: Packaging of[7]

## 3. Properties

3.1 Methyl isoamyl ketone shall conform to the following requirements:

| | |
|---|---|
| Apparent specific gravity: | |
| 20/20°C | 0.812 to 0.815 |
| 25/25°C | 0.809 to 0.812 |
| Color, Pt-Co scale, max | 15 |
| Distillation, °C | |
| Initial boiling point, min | 140 |
| Dry point, max | 148 |
| Water, wt %, max | 0.1 |
| Acidity as acetic acid, wt %, max | 0.02 |
| Purity, wt %, min | 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 test methods:

5.1.1 *Apparent Specific Gravity*—Determine the apparent 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 Guide D 268 or Test Method D 4052.

5.1.2 *Color*—Test Method D 1209.

5.1.3 *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.

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 shall be agreed upon by the purchaser and the supplier.

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

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[1] This specification is under the jurisdiction of ASTM Committee D-1 on Paint and Related Coatings and Materials and is the direct responsibility of Subcommittee D01.35 on Solvents, Plasticizers, and Chemical Intermediates.

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[2] IUPAC—approved name is 5-methyl-2-hexanone.

[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.

[7] Available from Standardization Order Desk, Bldg. 4 Section D, 700 Robbins Ave., Philadelphia, PA 19111-5094.