



Designation: D 4836 – 04

# Standard Specification for Dipropylene Glycol Monomethyl Ether<sup>1</sup>

This standard is issued under the fixed designation D 4836; 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 dipropylene glycol monomethyl ether (DPM).

NOTE 1—Dipropylene glycol monomethyl ether (DPM) is a mixture of isomers, the predominant isomer being 1-(2-methoxy-1-methylethoxy)-2-propanol.

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 E 29.

1.3 The values stated in SI units are to be regarded as the standard. The values given in parentheses are for information only.

1.4 For specific hazard information and guidance, consult the supplier’s Material Safety Data Sheet for materials listed in this standard.

## 2. Referenced Documents

### 2.1 ASTM Standards:<sup>2</sup>

- D 268 Guide for Sampling and Testing Volatile Solvents and Chemical Intermediates for Use in Paint and Related Coatings and Materials
- D 891 Test Methods for Specific Gravity, Apparent, of Liquid Industrial Chemicals
- D 1078 Test Method for Distillation Range of Volatile Organic Liquids
- D 1209 Test Method for Color of Clear Liquids (Platinum-Cobalt Scale)
- D 1364 Test Method for Water in Volatile Solvents (Karl Fischer Reagent Titration Method)
- D 1613 Test Method for Acidity in Volatile Solvents and Chemical Intermediates Used in Paint, Varnish, Lacquer, and Related Products

<sup>1</sup> 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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<sup>2</sup> 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.

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

D 4773 Test Method for Purity of Propylene Glycol Monomethyl Ether, Dipropylene Glycol Monomethyl Ether, and Propylene Glycol Monomethyl Ether Acetate

E 1 Specification for ASTM Thermometers

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

E 300 Practice For Sampling Industrial Chemical

2.2 U.S. Federal Specification:

PPP-C-2020 Chemicals, Liquid, Dry, and Paste: Packaging of<sup>3</sup>

## 3. Properties

3.1 Dipropylene glycol monomethyl ether (DPM) shall conform to the following requirements:

Assay, weight %, min	98.0
Initial boiling point, min	184
Dry point, max	195
Apparent specific gravity: 20/20°C	0.953 to 0.956
or 25/25°C	0.949 to 0.952
Color, platinum-cobalt scale, max	15
Water, weight %, max	0.15
Acidity (free acid as acetic acid), weight %, max	0.01 <sup>A</sup>

<sup>A</sup> Equivalent to 0.1 mg of potassium hydroxide (KOH) per 1 g of specimen.

## 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 test methods:

5.1.1 Assay—Test Method D 4773.

5.1.2 Distillation Range—Test Method D 1078, using an ASTM Solvents Distillation Thermometer 104C, having a range from 173 to 227°C and conforming to the requirements of Specification E 1.

5.1.3 Apparent Specific Gravity—Determine the apparent specific gravity by any convenient method that is accurate to

<sup>3</sup> Available from Standardization Documents Order Desk, DODSSP, Bldg. 4, Section D, 700 Robbins Ave., Philadelphia, PA 19111-5098.

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