



Standard Specification for Propylene Glycol Monomethyl Ether Acetate¹

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1. Scope*

1.1 This specification covers propylene glycol monomethyl ether acetate (PMA).

NOTE 1—Propylene glycol monomethyl ether acetate (PMA) is a mixture of 1-methoxy-2-acetoxypropane and 2-methoxy-1-acetoxypropane.

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

1.3 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.

1.4 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:²

D1078 Test Method for Distillation Range of Volatile Organic Liquids

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

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

D4773 Test Method for Purity of Propylene Glycol Monomethyl Ether, Dipropylene Glycol Monomethyl Ether, and Propylene Glycol Monomethyl Ether Acetate

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 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.

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:³

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

3. Properties

3.1 Propylene glycol monomethyl ether acetate (PMA) shall conform to the following requirements:

Purity, min, weight %	99
Color, platinum-cobalt scale, max (Note 2)	15
Water, max, weight %	0.05
Distillation range, °C:	
Initial boiling point, min	140
Dry boiling point, max	150
Acidity (free acid as acetic acid), max, weight %	0.02 ⁴
Glycol ether, max, weight %	0.5

⁴ Equivalent to 0.2 mg of potassium hydroxide (KOH) per gram of specimen.

NOTE 2—Instrumental Pt-Co color determined by Test Method D5386 have been shown to have no statistically significant difference from Pt-Co color determined by Test Method D1209. However, it is not known whether propylene glycol monomethyl ether acetate was part of the sample set included in the interlaboratory study.

4. Sampling

4.1 The material shall be sampled in accordance with Practice E300.

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 *Gas Chromatographic Method*—Test Method D4773.

5.1.2 *Color*—Test Method D1209 (see Note 2).

5.1.3 *Water*—Test Method D1364.

5.1.4 *Acidity*—Test Method D1613.

5.1.5 *Distillation Range*—Test Method D1078, using a temperature measuring device having a range of 123 to 177°C and a resolution of 0.1°C.

³ 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

6. Packaging and Package Marking

6.1 Package size shall be as agreed upon between 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.

7. Keywords

7.1 PM acetate; propylene glycol monomethyl ether acetate; solvent

SUMMARY OF CHANGES

Committee D01.35 has identified the location of selected changes to this standard since the last issue (D4835 - 03) that may impact the use of this standard. (Approved November 1, 2008.)

- (1) Added new Note **Note 2** to **3.1**.
- (2) Added Test Method **D5386** to list of Referenced Documents.
- (3) Referenced new **Note 2** in **5.1.2**.
- (4) Modified **5.1.5**.

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