



Designation: D 4835 – 93 (Reapproved 1998)

AMERICAN SOCIETY FOR TESTING AND MATERIALS
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Standard Specification for Propylene Glycol Monomethyl Ether Acetate¹

This standard is issued under the fixed designation D 4835; 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 propylene glycol monomethyl ether acetate (PMA).

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

1.2 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:

D 1078 Test Method for Distillation Range of Volatile Organic Liquids²

D 1209 Test Method for Color of Clear Liquids (Platinum-Cobalt Scale)²

D 1364 Test Method for Water in Volatile Solvents (Karl Fischer Reagent Titration Method)²

D 1613 Test Method for Acidity in Volatile Solvents and Chemical Intermediates Used in Paint, Varnish, Lacquer, and Related Products²

D 4773 Test Method for Purity of Propylene Glycol Monomethyl Ether, Dipropylene Glycol Monomethyl Ether, and Propylene Glycol Monomethyl Ether Acetate²

E 300 Practice for Sampling Industrial Chemicals³

2.2 U.S. Federal Specification:

PPP-C-2020 Chemicals, Liquid, Dry, and Paste: Packaging of⁴

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 | 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 |

⁴Equivalent to 0.2 mg of potassium hydroxide (KOH) per gram 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 ASTM test methods:

5.1.1 *Gas Chromatographic Method*—Test Method D 4773.

5.1.2 *Color*—Test Method D 1209.

5.1.3 *Water*—Test Method D 1364.

5.1.4 *Acidity*—Test Method D 1613.

5.1.5 *Distillation Range*—Test Method D 1078.

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 propylene glycol monomethyl ether acetate

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.

Current edition approved May 15, 1993. Published July 1993. Originally published as D 4835 – 88. Last previous edition D 4835 – 89.

² *Annual Book of ASTM Standards*, Vol 06.04.

³ *Annual Book of ASTM Standards*, Vol 15.05.

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