



Designation: D5164 – 05 (Reapproved 2019)

Standard Specification for Propylene Glycol and Dipropylene Glycol¹

This standard is issued under the fixed designation D5164; 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 and dipropylene glycol for use in the preparation of surface coatings.

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 [E29](#).

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

1.4 For specific hazard information and guidance, see the supplier’s Material Safety Data Sheets.

1.5 *This international standard was developed in accordance with internationally recognized principles on standardization established in the Decision on Principles for the Development of International Standards, Guides and Recommendations issued by the World Trade Organization Technical Barriers to Trade (TBT) Committee.*

2. Referenced Documents

2.1 *ASTM Standards:*²

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

[D4052](#) Test Method for Density, Relative Density, and API Gravity of Liquids by Digital Density Meter

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

[E202](#) Test Methods for Analysis of Ethylene Glycols and Propylene Glycols

[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 or dipropylene glycol shall conform to the respective properties shown in [Table 1](#).

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 Test Methods [E202](#).

5.2 The apparent specific gravity can also be determined in accordance with Test Method [D4052](#).

6. Packaging and Package Marking

6.1 Package size shall be 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 dipropylene glycol; propylene glycol

³ Available from Standardization Documents Order Desk, DODSSP, Bldg. 4, Section D, 700 Robbins Ave., Philadelphia, PA 19111-5098, <http://dodssp.daps.dla.mil>.