

This document is not an ASTM standard and is intended only to provide the user of an ASTM standard an indication of what changes have been made to the previous version. Because it may not be technically possible to adequately depict all changes accurately, ASTM recommends that users consult prior editions as appropriate. In all cases only the current version of the standard as published by ASTM is to be considered the official document.



Designation: D 2636 – 91 (Reapproved 1996)



Designation: D 2636 – 01

Standard Specification for Hexylene Glycol¹

This standard is issued under the fixed designation D 2636; 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 This specification is under the jurisdiction of ASTM Committee D-1 D01 on Paint and Related Coatings, Materials, and Applications and is the direct responsibility of Subcommittee D 01.35 on Solvents, Plasticizers, and Chemical Intermediates.

Current edition approved May 15, 1994; 10, 2001. Published July 1994; 2001. Originally published as D 2636 – 67. Last previous edition D 2636 – 8791 (1996).

1. Scope*

- 1.1 This specification covers hexylene glycol² for use in paint, varnish, lacquer, and related products.
- 1.2 For specific hazard information and guidance, consult 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 Materials³
- D 1078 Test Method for Distillation Range of Volatile Organic Liquids³
- 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 Products³
- D 1722 Test Method for Water Miscibility of Water-Soluble Solvents³
- D 4052 Test Method for Density and Relative Density of Liquids by Digital Density Meter⁴
- E 1 Specification for ASTM Thermometers⁵
- E 300 Practice for Sampling Industrial Chemicals⁶

2.2 U.S. Federal Specification:

- PPP-C-2020 Chemicals, Liquid, Dry, and Paste: Packaging of⁷

3. Properties

- 3.1 Hexylene glycol shall conform to the following requirements:

Apparent specific gravity,	
—20/20°C	0.921 to 0.924
—20/20°C	0.921 to 0.925
—25/25°C	0.918 to 0.921
—25/25°C	0.918 to 0.922
Color, Pt-Co units, max	15
Distillation range	3.0°C to include 197.1°C
Acidity (free acid as acetic acid)	0.005
wt %, max	
Water, wt %, max	0.1
Water miscibility	passes test

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 methods:

² This compound is also known as 2-methyl pentanediol-2,4.

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 Documents Order Desk, Bldg. 4 Section D, 700 Robbins Ave., Philadelphia, PA 19111-5094, Attn: NPODS.

5.1.1 *Apparent Specific Gravity*—Determine the apparent specific gravity by any method that is accurate to the third decimal place, the temperature of both specimen and water being 20°C or 25°C. (See Guide D 268 and Test Method D 4052).

5.1.2 *Color*—Test Method D 1209.

5.1.3 *Distillation Range*—Test Method D 1078 for manual distillation, use an ASTM Solvents Distillation Thermometer 104C having a range from 173 to 227°C, and conforming to the requirements in Specification E 1.

5.1.4 *Acidity*—Test Method D 1613.

5.1.5 *Water*—Test Method D 1364.

5.1.6 *Water Miscibility*—Test Method D 1722.

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.

7. Keywords

7.1 hexylene glycol

SUMMARY OF CHANGES

Committee D01 has identified the location of selected changes to this standard since the last date of issue that may impact the use of this standard.

(1) Revision of updated footnotes.

(2) Revision of Section 3, Properties, to change the upper limits on the apparent specific gravity from 0.924 to 0.925 at 20 °C and from 0.921 to 0.922 at 25 °C. These upper limits are more appropriate for pure material.

(3) Revision of 5.1.3 to include wording that thermometer 104C is required if distillation is performed by the manual method. Test Method D 1078 allows manual or automated distillation but previous wording in this section implied that manual distillation is required.

(4) Revision of 6.2 to include appropriate commas.

ASTM International takes no position respecting the validity of any patent rights asserted in connection with any item mentioned in this standard. Users of this standard are expressly advised that determination of the validity of any such patent rights, and the risk of infringement of such rights, are entirely their own responsibility.

This standard is subject to revision at any time by the responsible technical committee and must be reviewed every five years and if not revised, either reapproved or withdrawn. Your comments are invited either for revision of this standard or for additional standards and should be addressed to ASTM International Headquarters. Your comments will receive careful consideration at a meeting of the responsible technical committee, which you may attend. If you feel that your comments have not received a fair hearing you should make your views known to the ASTM Committee on Standards, at the address shown below.

This standard is copyrighted by ASTM International, 100 Barr Harbor Drive, PO Box C700, West Conshohocken, PA 19428-2959, United States. Individual reprints (single or multiple copies) of this standard may be obtained by contacting ASTM at the above address or at 610-832-9585 (phone), 610-832-9555 (fax), or service@astm.org (e-mail); or through the ASTM website (www.astm.org).