



Designation: D841 – 17

Standard Specification for Nitration Grade Toluene¹

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1. Scope

1.1 This specification covers nitration grade toluene.

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 Consult OSHA regulations, supplier’s Safety Data Sheets, and local regulations for all materials used in this specification.

1.4 *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

D848 Test Method for Acid Wash Color of Industrial Aromatic Hydrocarbons

D849 Test Method for Copper Strip Corrosion by Industrial Aromatic Hydrocarbons

D2360 Test Method for Trace Impurities in Monocyclic Aromatic Hydrocarbons by Gas Chromatography (Withdrawn 2016)³

D3437 Practice for Sampling and Handling Liquid Cyclic Products

D5386 Test Method for Color of Liquids Using Tristimulus Colorimetry

¹ This specification is under the jurisdiction of ASTM Committee D16 on Aromatic, Industrial, Specialty and Related Chemicals and is the direct responsibility of Subcommittee D16.01 on Benzene, Toluene, Xylenes, Cyclohexane and Their Derivatives.

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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.

³ The last approved version of this historical standard is referenced on www.astm.org.

D7504 Test Method for Trace Impurities in Monocyclic Aromatic Hydrocarbons by Gas Chromatography and Effective Carbon Number

E29 Practice for Using Significant Digits in Test Data to Determine Conformance with Specifications

E2680 Test Method for Appearance of Clear, Transparent Liquids (Visual Inspection Procedure)

2.2 *Federal Specification:*⁴

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

2.3 *Other Document:*

OSHA Regulations, 29 CFR paragraphs 1910.1000 and 1910.1200⁵

3. Properties

3.1 Nitration Grade Toluene shall conform to the following requirements:

Property	Specification	ASTM Test Method ^A
Nonaromatic hydrocarbons, max, volume % (wt %)	1.5 (1.2)	D2360, D7504
Purity, min. wt%	98.8	D2360 or D7504
Acid wash color, max	pass with 2	D848
Copper corrosion	pass (1A or 1B)	D849
Appearance, free of haze, particulates or suspended matter particles	pass	E2680
Color, Pt/Co scale, max	20	D5386

^A If more than one method is listed for a property the producer and user should agree on the reference method.

3.2 See Section 6 for non-mandatory supplementary requirements.

4. Sampling

4.1 The material shall be sampled in accordance with Practice D3437.

5. Packaging and Labeling for U.S. Government Procurements

5.1 United States Government procurements shall be packaged and labeled in accordance with the applicable paragraphs of Fed. Spec. PPP-C-2020.

⁴ Available from DLA Document Services, Building 4/D, 700 Robbins Ave., Philadelphia, PA 19111-5094, http://quicksearch.dla.mil.

⁵ Available from U.S. Government Printing Office Superintendent of Documents, 732 N. Capitol St., NW, Mail Stop: SDE, Washington, DC 20401, http://www.access.gpo.gov.

6. Supplementary Requirements (Non-mandatory)

6.1 The following supplementary requirements shall apply only when specified by the purchaser in the purchase order or contract:

Property	ASTM Test Method
1,4-dioxane, max, mg/kg	D7504

7. Keywords

7.1 toluene

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