



# Standard Specification for Nitration Grade Toluene<sup>1</sup>

This standard is issued under the fixed designation D 841; 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 ( $\epsilon$ ) indicates an editorial change since the last revision or reapproval.

## 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 E 29.
- 1.3 Consult OSHA regulations, supplier’s Material Safety Data Sheets, and local regulations for all materials used in this specification.

## 2. Referenced Documents

### 2.1 ASTM Standards:

- D 848 Test Method for Acid Wash Color of Industrial Aromatic Hydrocarbons<sup>2</sup>
- D 849 Test Method for Copper Strip Corrosion of Industrial Aromatic Hydrocarbons<sup>2</sup>
- D 850 Test Method for Distillation of Industrial Aromatic Hydrocarbons and Related Materials<sup>2</sup>
- D 1209 Test Method for Color of Clear Liquids (Platinum-Cobalt Scale)<sup>2</sup>
- D 2360 Test Method for Trace Impurities in Monocyclic Aromatic Hydrocarbons by Gas Chromatography<sup>2</sup>
- D 3437 Practice for Sampling and Handling Liquid Cyclic Products<sup>2</sup>
- D 5386 Test Methods for Color of Liquids Using Tristimulus Colorimetry<sup>2</sup>
- E 29 Practice for Using Significant Digits in Test Data to Determine Conformance with Specifications<sup>3</sup>

<sup>1</sup> This specification is under the jurisdiction of ASTM Committee D16 on Aromatic Hydrocarbons and Related Chemicals and is the direct responsibility of Subcommittee D 16.01 on Benzene, Toluene, Xylenes, Cyclohexane, and Their Derivatives.

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<sup>2</sup> Annual Book of ASTM Standards, Vol 06.04.

<sup>3</sup> Annual Book of ASTM Standards, Vol 14.02.

## 2.2 Federal Specification:<sup>4</sup>

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

## 2.3 Other Document:

OSHA Regulations, 29 CFR, paragraphs 1910.1000 and 1910.1200<sup>5</sup>

## 3. Properties

3.1 Nitration grade toluene shall conform to the following requirements:

Property	Specification	ASTM Test Method
Nonaromatic hydrocarbons, max, volume % (wt %)	1.5 (1.2)	D 2360
Acid wash color, max	pass with 2	D 848
Copper corrosion Appearance	pass (1A or 1B) <sup>A</sup>	D 849
Color, Pt/Co scale, max	20	...
		D 1209 or D 5386
Distillation range including the temperature 110.6°C at 101.3 kPa (760 mm Hg pressure), max, ° C	1.0	D 850

<sup>A</sup> Clear liquid free of sediment and haze when observed at 18.3 to 25.6°C (65 to 78°F).

## 4. Sampling

4.1 The material shall be sampled in accordance with Practice D 3437.

## 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.

## 6. Keywords

### 6.1 toluene

<sup>4</sup> Available from Standardization Documents Order Desk, DODSSP, Bldg. 4, Section D, 700 Robbins Ave., Philadelphia, PA 19111-5098.

<sup>5</sup> Available from U.S. Government Printing Office Superintendent of Documents, 732 N. Capitol St., NW, Mail Stop: SDE, Washington, DC 20401.

\*A Summary of Changes section appears at the end of this standard.

**SUMMARY OF CHANGES**

Committee D16 has identified the location of selected changes to this standard since the last issue (D 841 - 97) that may impact the use of this standard.

- (1) Section 3.1—removed specifications for Density and Relative Density. D 3505 and D 4052, Test Methods for Density and Relative Density.
- (2) Section 2.1—removed references to ASTM Standards

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