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AMERICAN SOCIETY FOR TESTING AND MATERIALS
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Standard Specification for Nitration Grade Toluene[1,2]

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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 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[3]

D 849 Test Method for Copper Strip Corrosion of Industrial Aromatic Hydrocarbons[3]

D 850 Test Method for Distillation of Industrial Aromatic Hydrocarbons and Related Materials[3]

D 1209 Test Method for Color of Clear Liquids (Platinum-Cobalt Scale)[3]

D 2360 Test Method for Trace Impurities in Monocyclic Aromatic Hydrocarbons by Gas Chromatography[3]

D 3437 Practice for Sampling and Handling Liquid Cyclic Products[3]

D 3505 Test Method for Density or Relative Density of Pure Liquid Chemicals[3]

D 4052 Test Method for Density and Relative Density of Liquids by Digital Density Meter[4]

D 5386 Test Methods for Color of Liquids Using Tristimulus Colorimetry[3]

E 29 Practice for Using Significant Digits in Test Data to Determine Conformance with Specifications[5]

2.2 *Federal Specification:*[6]

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

2.3 *Other Document:*

OSHA Regulations, 29 CFR, paragraphs 1910.1000 and 1910.1200[7]

3. Properties

3.1 Nitration grade toluene shall conform to the following requirements:

Property	Specification	ASTM Test Method
Nonaromatic hydrocarbons, max, volume %	1.5	D 2360
Acid wash color, max	pass with 2	D 848
Copper corrosion	pass (1A or 1B)	D 849
Appearance	[A]	...
Color, Pt/Co scale, max	20	D 1209 or D 5386
Relative density, 15.56/15.56°C	0.869 to 0.873	D 3505 or D 4052
or		
Density, 20°C, g/mL	0.865 to 0.870	...
Distillation range including the temperature 110.6°C at 101.3 kPa (760 mm Hg pressure), max,° C	1.0	D 850

[A] 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

[1] This specification is under the jurisdiction of ASTM Committee D-16 on Aromatic Hydrocarbons and Related Chemicals and is the direct responsibility of Subcommittee D 16.0A on BTX, Cyclohexane, and Their Derivatives.

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[2] This material was formerly known as "nitration pure toluol."

[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 14.02.

[6] Available from Standardization Documents Order Desk, Bldg. 4 Section D, 700 Robbins Ave., Philadelphia, PA 19111-5094, Attn: NPODS.

[7] Available from Superintendent of Documents, U.S. Government Printing Office, Washington, DC 20402.