



Designation: D4734 – 20

Standard Specification for Refined Benzene-545¹

This standard is issued under the fixed designation D4734; 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 reappraisal. A superscript epsilon (ϵ) indicates an editorial change since the last revision or reappraisal.

1. Scope*

1.1 This specification covers benzene-545.

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

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

- D852 Test Method for Solidification Point of Benzene
- D1492 Test Method for Bromine Index of Aromatic Hydrocarbons by Coulometric Titration
- D3437 Practice for Sampling and Handling Liquid Cyclic Products
- D4735 Test Method for Determination of Trace Thiophene in Refined Benzene by Gas Chromatography
- D5386 Test Method for Color of Liquids Using Tristimulus Colorimetry

- D5776 Test Method for Bromine Index of Aromatic Hydrocarbons by Electrometric Titration
 - D6875 Test Method for Solidification Point of Industrial Organic Chemicals by Thermistor
 - D7011 Test Method for Determination of Trace Thiophene in Refined Benzene by Gas Chromatography and Sulfur Selective Detection
 - D7183 Test Method for Determination of Total Sulfur in Aromatic Hydrocarbons and Related Chemicals by Ultra-violet Fluorescence
 - D7184 Test Method for Ultra Low Nitrogen in Aromatic Hydrocarbons by Oxidative Combustion and Reduced Pressure Chemiluminescence Detection
 - D7360 Test Method for Analysis of Benzene by Gas Chromatography with External Calibration
 - D7504 Test Method for Trace Impurities in Monocyclic Aromatic Hydrocarbons by Gas Chromatography and Effective Carbon Number
 - D8005 Test Method for Color of Clear Liquids (Platinum-Cobalt Scale)
 - E29 Practice for Using Significant Digits in Test Data to Determine Conformance with Specifications
 - E1064 Test Method for Water in Organic Liquids by Coulometric Karl Fischer Titration
 - E2680 Test Method for Appearance of Clear, Transparent Liquids (Visual Inspection Procedure)
- 2.2 *Other Document:*
- OSHA Regulations, 29 CFR paragraphs 1910.1000 and 1910.1200³

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.

Current edition approved April 1, 2020. Published April 2020. Originally approved in 1987. Last previous edition approved in 2019 as D4734 – 19. DOI: 10.1520/D4734-20.

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 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.

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