



Designation: D5136 – 17a

## Standard Specification for High Purity *p*-Xylene<sup>1</sup>

This standard is issued under the fixed designation D5136; 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 high purity *p*-Xylene.

1.2 The following applies to all specified limits in this specification: for purposes of determining conformance with this specification, 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 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:*<sup>2</sup>

D850 Test Method for Distillation of Industrial Aromatic Hydrocarbons and Related Materials

D1209 Test Method for Color of Clear Liquids (Platinum-Cobalt Scale)

D3437 Practice for Sampling and Handling Liquid Cyclic Products

D5386 Test Method for Color of Liquids Using Tristimulus Colorimetry

D5917 Test Method for Trace Impurities in Monocyclic

Aromatic Hydrocarbons by Gas Chromatography and External Calibration

D7183 Test Method for Determination of Total Sulfur in Aromatic Hydrocarbons and Related Chemicals by Ultraviolet Fluorescence

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 *Other Document:*

OSHA Regulations, 29 CFR paragraphs 1910.1000 and 1910.1200<sup>3</sup>

### 3. Properties

3.1 High purity *p*-Xylene shall conform to the following requirements:

Property	Specification	ASTM Test Method <sup>4</sup>
Purity, <sup>B</sup> min, weight %	99.7	D5917 or D7504
<i>m</i> -Xylene, max, weight %	0.20	D5917 or D7504
<i>o</i> -Xylene, max, weight %	0.10	D5917 or D7504
Sulfur, max, mg/kg	1.0	D7183
Toluene, max, weight %	0.10	D5917 or D7504
Ethylbenzene, max, weight %	0.20	D5917 or D7504
Nonaromatic hydrocarbons, max, weight %	0.20	D5917 or D7504
Appearance, free of haze, particulates or suspended matter particles	pass	E2680
Color, max, Pt/Co scale	10	D1209 or D5386
Distillation range, including the temperature 138.3°C at 101.3 kPa (760 mm Hg) pressure, max, °C	1.0	D850

<sup>4</sup> If more than one method is listed, the producer and user should agree on the referee method.

<sup>B</sup> Purity, molar %, minimum, will be specified when the freeze point procedure under development is completed.

### 4. Sampling

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

<sup>3</sup> 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.

<sup>1</sup> 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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<sup>2</sup> 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.