Designation: D 5136 – 06

Standard Specification for High Purity p-Xylene[1]

This standard is issued under the fixed designation D 5136; 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 (ε) 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 E 29.

1.3 Consult current 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:* [2]

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

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

D 3437 Practice for Sampling and Handling Liquid Cyclic Products

D 3798 Test Method for Analysis of p-Xylene by Gas Chromatography

D 5386 Test Method for Color of Liquids Using Tristimulus Colorimetry

D 5453 Test Method for Determination of Total Sulfur in Light Hydrocarbons, Spark Ignition Engine Fuel, Diesel Engine Fuel, and Engine Oil by Ultraviolet Fluorescence

D 5917 Test Method for Trace Impurities in Monocyclic Aromatic Hydrocarbons by Gas Chromatography and External Calibration

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

2.2 *Other Document:*

OSHA Regulations, 29 CFR, paragraphs 1910.1000 and 1910.1200[3]

3. Properties

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

Property	Specification	ASTM Test Method[A]
Purity,[B] min, weight %	99.7	D 3798 or D 5917
m-Xylene, max, weight %	0.20	D 3798 or D 5917
o-Xylene, max, weight %	0.10	D 3798 or D 5917
Sulfur, max, mg/kg	1.0	D 5453
Toluene, max, weight %	0.10	D 3798 or D 5917
Ethylbenzene, max, weight %	0.20	D 3798 or D 5917
Nonaromatic hydrocarbons, max, weight %	0.20	D 3798 or D 5917
Appearance	C	...
Color, max, Pt/Co scale	10	D 1209 or D 5386
Distillation range, including the temperature 138.3°C at 101.3 kPa (760 mm Hg) pressure, max, ° C	1.0	D 850

[A] If more than one method is listed, the producer and user should agree on the referee method.

[B] Purity, molar %, minimum, will be specified when the freeze point procedure under development is completed.

[C] 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. Keywords

5.1 p-Xylene

[1] This specification is under the jurisdiction of ASTM Committee D16 on Aromatic Hydrocarbons 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] 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.**