



Designation: D 5471 – 04

Standard Specification for O-Xylene 980¹

This standard is issued under the fixed designation D 5471; 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 approval. A superscript epsilon (ϵ) indicates an editorial change since the last revision or reapproval.

1. Scope*

1.1 This specification covers a grade of o-xylene identified as ortho-Xylene 980.

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 and 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 1492 Test Method for Bromine Index of Aromatic Hydrocarbons by Coulometric Titration

D 3437 Practice for Sampling and Handling Cyclic Products

D 3797 Test Method for Analysis of o-Xylene by Gas Chromatography

D 5386 Test Method for Color of Liquids Using Tristimulus Colorimetry

D 5776 Test Method for Bromine Index of Aromatic Hydrocarbons by Electrometric Titration

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

2.2 Other Document:³

OSHA Regulations 29 CFR, Paragraphs 1910.1000 and 1910.1200

3. Properties

3.1 O-Xylene 980 shall conform to the following requirements:

Property	Specification	ASTM Test Method ⁴
Purity, min, wt %	98.0	D 3797
Nonaromatic hydrocarbons, max, wt %	0.5	D 3797
p-Xylene plus m-Xylene, max, wt %	1.3	D 3797
C9 and heavier aromatics, max, wt %	0.8	D 3797
Cumene ^B	0.5	D 3797
Bromine index, max mg/100 g	100	D 1492 or D 5776
Appearance	C	...
Color, Pt-Co scale, max	10	D 1209 or D 5386
Distillation range, including the temperature, 144.4°C at 101.3 kPa (760 mm Hg) pressure, max, °C	2.0	D 850

⁴ If more than one method is listed for a property the producer and user should agree on the referee method.

^B Cumene is a significant component in o-xylene as it may contribute to deflagrations in some processes under certain conditions.

^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 o-Xylene

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.