



Designation: D5309 – 08 (Reapproved 2013)^{ε1} D5309 – 16

Standard Specification for Cyclohexane 999¹

This standard is issued under the fixed designation D5309; 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.

~~ε¹ NOTE—Footnotes in 3.1 were corrected editorially in July 2013.~~

1. Scope*

1.1 This specification covers a grade of cyclohexane identified as “cyclohexane 999.”

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 E29.

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

2. Referenced Documents

2.1 *ASTM Standards:*²

[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](#)

[D7183 Test Method for Determination of Total Sulfur in Aromatic Hydrocarbons and Related Chemicals by Ultraviolet Fluorescence](#)

[D7266 Test Method for Analysis of Cyclohexane by Gas Chromatography \(External Standard\)](#)

~~[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](#)

2.2 *Other Documents:*

[OSHA Regulations, 29 CFR Paragraphs 1910.1000 and 1910.1200](#)³ ~~16~~

<https://standards.iteh.ai/catalog/standards/sist/1dd56df7-f1b3-49d9-8c9d-48c91d01f7374/astm-d5309-16>

3. Properties

3.1 Cyclohexane 999 shall conform to the following requirements:

Property	Specification	ASTM Test Method
Purity, min, weight %	99.90	D7266
Benzene, max, mg/kg	50	D7266
n-Hexane, max, mg/kg	200	D7266
Methylcyclohexane, max, mg/kg	200	D7266
Methylcyclopentane, max, mg/kg	150	D7266
Sulfur, max, mg/kg ^A	1	D7183
Appearance ^A	—	
Color, max, Platinum/Cobalt scale^B	40	D1209 or D5386
Color, max, Platinum/Cobalt scale ^B	<u>10</u>	D5386 or D8005

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~~ 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