



Designation: D2827 – 19

# Standard Specification for Styrene Monomer<sup>1</sup>

This standard is issued under the fixed designation D2827; 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 styrene monomer.

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 measure are included in this specification.

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>

- D1016 Test Method for Purity of Hydrocarbons from Freezing Points
- D2119 Test Method for Aldehydes in Styrene Monomer
- D2121 Test Methods for Polymer Content of Styrene Monomer
- D2340 Test Method for Peroxides in Styrene Monomer
- D3437 Practice for Sampling and Handling Liquid Cyclic Products
- D4017 Test Method for Water in Paints and Paint Materials

<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 D16.07 on Styrene, Ethylbenzene and C9 and C10 Aromatic Hydrocarbons.

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<sup>2</sup> For referenced ASTM standards, visit the ASTM website, [www.astm.org](http://www.astm.org), or contact ASTM Customer Service at [service@astm.org](mailto:service@astm.org). For *Annual Book of ASTM Standards* volume information, refer to the standard’s Document Summary page on the ASTM website.

by Karl Fischer Method

- D4590 Test Method for Colorimetric Determination of *p*-*tert*-Butylcatechol In Styrene Monomer or AMS ( $\alpha$ -Methylstyrene) by Spectrophotometry
  - D5135 Test Method for Analysis of Styrene by Capillary Gas Chromatography
  - D5386 Test Method for Color of Liquids Using Tristimulus Colorimetry
  - D6229 Test Method for Trace Benzene in Hydrocarbon Solvents by Capillary Gas Chromatography
  - D6304 Test Method for Determination of Water in Petroleum Products, Lubricating Oils, and Additives by Coulometric Karl Fischer Titration
  - D7375 Test Method for Trace Quantities of Water in Aromatic Hydrocarbons and Their Mixtures by Coulometric Karl Fischer Titration (Withdrawn 2017)<sup>3</sup>
  - D7504 Test Method for Trace Impurities in Monocyclic Aromatic Hydrocarbons by Gas Chromatography and Effective Carbon Number
  - D7704 Test Method for Total Aldehydes in Styrene Monomer by Potentiometric Titration
  - 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 Documents:*
- OSHA Regulations, 29CFR paragraphs 1910.1000 and 1910.1200<sup>4</sup>

## 3. Properties

3.1 Styrene monomer shall conform to the following requirements:

<sup>3</sup> The last approved version of this historical standard is referenced on [www.astm.org](http://www.astm.org).

<sup>4</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>.

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