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Standard Specification for ASTM Reference Fluid for Coolant Tests¹

This standard is issued under the fixed designation D3585; 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 reappraisal. A superscript epsilon (ε) indicates an editorial change since the last revision or reappraisal.

1. Scope

1.1 This specification covers a reference ethylene glycol-base test fluid to be used in providing base line data for ASTM coolant test procedures.

1.2 *This standard does not purport to address all of the safety concerns, if any, associated with its use. It is the responsibility of the user of this standard to establish appropriate safety, health, and environmental practices and determine the applicability of regulatory limitations prior to use.*

1.3 *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:*²

- D501 Test Methods of Sampling and Chemical Analysis of Alkaline Detergents
- D538 Specification for Trisodium Phosphate (Withdrawn 2001)³
- D891 Test Methods for Specific Gravity, Apparent, of Liquid Industrial Chemicals
- D1078 Test Method for Distillation Range of Volatile Organic Liquids
- D1119 Test Method for Percent Ash Content of Engine Coolants
- D1120 Test Method for Boiling Point of Engine Coolants
- D1121 Test Method for Reserve Alkalinity of Engine Coolants and Antirusts
- D1122 Test Method for Relative Density of Engine Coolant

¹ This specification is under the jurisdiction of ASTM Committee D15 on Engine Coolants and Related Fluids and is the direct responsibility of Subcommittee D15.01 on Reference Test Materials.

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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 The last approved version of this historical standard is referenced on www.astm.org.

- Concentrates and Engine Coolants By The Hydrometer
- D1123 Test Methods for Water in Engine Coolant Concentrate by the Karl Fischer Reagent Method
- D1176 Practice for Sampling and Preparing Aqueous Solutions of Engine Coolants or Antirusts for Testing Purposes
- D1177 Test Method for Freezing Point of Aqueous Engine Coolants
- D1287 Test Method for pH of Engine Coolants and Antirusts
- D1384 Test Method for Corrosion Test for Engine Coolants in Glassware
- D1613 Test Method for Acidity in Volatile Solvents and Chemical Intermediates Used in Paint, Varnish, Lacquer, and Related Products
- D1881 Test Method for Foaming Tendencies of Engine Coolants in Glassware
- D3634 Test Method for Trace Chloride Ion in Engine Coolants
- D5827 Test Method for Analysis of Engine Coolant for Chloride and Other Anions by Ion Chromatography
- D5931 Test Method for Density and Relative Density of Engine Coolant Concentrates and Aqueous Engine Coolants by Digital Density Meter
- E202 Test Methods for Analysis of Ethylene Glycols and Propylene Glycols

3. Chemical Composition Requirements

3.1 The reference test fluid concentrate shall be prepared to conform to the requirements as to chemical composition prescribed in [Table 1](#).

4. Ingredient Requirements

4.1 The materials used to prepare the reference test fluid shall meet the requirements given in [Annex A1 – Annex A5](#).

5. Significance and Use

5.1 The data obtained for the reference test fluid are intended to be used by laboratory personnel to determine their capability to perform tests properly. If a particular determination does not fall within the prescribed limits, it has to be assumed that an error occurred in the application of the test procedure.

5.2 The coolant composition given in this specification is not intended to be a commercial product.