



## Standard Guide for Evaluation of Hydrocarbon Heat Transfer Fluids<sup>1</sup>

This standard is issued under the fixed designation D 5372; 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<sup>2</sup>

1.1 This guide provides information, without specific limits, for selecting standard test methods for testing heat transfer fluids for quality and aging. These test methods are considered particularly useful in characterizing hydrocarbon heat transfer fluids in closed systems.

### 2. Referenced Documents

#### 2.1 *ASTM Standards*:<sup>3</sup>

- D 86 [Test Method for Distillation of Petroleum Products at Atmospheric Pressure](#)
- D 91 [Test Method for Precipitation Number of Lubricating Oils](#)
- D 92 [Test Method for Flash and Fire Points by Cleveland Open Cup Tester](#)
- D 93 [Test Methods for Flash Point by Pensky-Martens Closed Cup Tester](#)
- D 95 [Test Method for Water in Petroleum Products and Bituminous Materials by Distillation](#)
- D 97 [Test Method for Pour Point of Petroleum Products](#)
- D 189 [Test Method for Conradson Carbon Residue of Petroleum Products](#)
- D 445 [Test Method for Kinematic Viscosity of Transparent and Opaque Liquids \(and the Calculation of Dynamic Viscosity\)](#)
- D 471 [Test Method for Rubber Property—Effect of Liquids](#)
- D 524 [Test Method for Ramsbottom Carbon Residue of Petroleum Products](#)
- D 664 [Test Method for Acid Number of Petroleum Products by Potentiometric Titration](#)
- D 893 [Test Method for Insolubles in Used Lubricating Oils](#)
- D 1160 [Test Method for Distillation of Petroleum Products at Reduced Pressure](#)
- D 1298 [Test Method for Density, Relative Density \(Specific Gravity\), or API Gravity of Crude Petroleum and Liquid Petroleum Products by Hydrometer Method](#)
- D 1500 [Test Method for ASTM Color of Petroleum Products \(ASTM Color Scale\)](#)<sup>3</sup>
- ~~D 2160 Test Method for Thermal Stability of Hydraulic Fluids~~ [Test Method for ASTM Color of Petroleum Products \(ASTM Color Scale\)](#)
- D 2270 [Practice for Calculating Viscosity Index from Kinematic Viscosity at 40 and 100°C](#)<sup>3</sup>
- D 2717 [Test Method for Thermal Conductivity of Liquids](#)
- D 2766 [Test Method for Specific Heat of Liquids and Solids](#)
- D 2887 [Test Method for Boiling Range Distribution of Petroleum Fractions by Gas Chromatography](#)<sup>3</sup>
- ~~D 3241 Test Method for Thermal Oxidation Stability of Aviation Turbine Fuels (JFTOT Procedure)~~ [Test Method for Boiling Range Distribution of Petroleum Fractions by Gas Chromatography](#)
- D 4530 [Test Method for Micro Carbon Residue of Petroleum Products](#)<sup>5</sup> [Test Method for Determination of Carbon Residue \(Micro Method\)](#)
- D 6743 [Test Method for Thermal Stability of Organic Heat Transfer Fluids](#)
- E 659 [Test Method for Autoignition Temperature of Liquid Chemicals](#)
- G 4 [Method for Conducting Corrosion Coupon Tests in Plant Equipment](#) [Guide for Conducting Corrosion Tests in Field Applications](#)

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<sup>2</sup> The background for this standard was developed by a questionnaire circulated by ASTM-ASLE technical division L-VI-2 and reported in *Lubrication Engineering*, Vol 32, No. 8, August 1976, pp. 411–416.

<sup>3</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.