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An American National Standard

Standard Specification for Aviation Turbine Fuels¹

This standard is issued under the fixed designation D 1655; 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.

This standard has been approved for use by agencies of the Department of Defense.

1. Scope

1.1 This specification covers the use of purchasing agencies in formulating specifications for purchases of aviation turbine fuel under contract.

1.2 This specification defines specific types of aviation turbine fuel for civil use in the operation and certification of aircraft and describes fuels found satisfactory for the operation of aircraft and engines. The specification can be used as a standard in describing the quality of aviation turbine fuels from the refinery to the aircraft.

1.3 This specification does not include all fuels satisfactory for aviation turbine engines. Certain equipment or conditions of use may permit a wider, or require a narrower, range of characteristics than is shown by this specification.

1.4 Aviation turbine fuels defined by this specification may be used in other than turbine engines that are specifically designed and certified for this fuel.

2. Referenced Documents

2.1 ASTM Standards:

- D 56 Test Method for Flash Point by Tag Closed Tester²
- D 86 Test Method for Distillation of Petroleum Products at Atmospheric Pressure²
- D 93 Test Methods for Flash Point by Pensky-Martens Closed Cup Tester²
- D 129 Test Method for Sulfur in Petroleum Products (General Bomb Method)²
- D 130 Test Method for Detection of Copper Corrosion from Petroleum Products by the Copper Strip Tarnish Test²
- D 156 Test Method for Saybolt Color of Petroleum Products (Saybolt Chromometer Method)²
- D 240 Test Method for Heat of Combustion of Liquid Hydrocarbon Fuels by Bomb Calorimeter²
- D 323 Test Method for Vapor Pressure of Petroleum Products (Reid Method)²
- D 381 Test Method for Existent Gum in Fuels by Jet Evaporation²

D 445 Test Method for Kinematic Viscosity of Transparent and Opaque Liquids (The Calculation of Dynamic Viscosity)²

D 1094 Test Method for Water Reaction of Aviation Fuels²

D 1266 Test Method for Sulfur in Petroleum Products (Lamp Method)²

D 1298 Test Method for Density, Relative Density (Specific Gravity), or API Gravity of Crude Petroleum and Liquid Petroleum Products by Hydrometer Method²

D 1319 Test Method for Hydrocarbon Types in Liquid Petroleum Products by Fluorescent Indicator Adsorption²

D 1322 Test Method for Smoke Point of Kerosine and Aviation Turbine Fuels²

D 1405 Test Method for Estimation of Net Heat of Combustion of Aviation Fuels²

D 1552 Test Method for Sulfur in Petroleum Products (High-Temperature Method)²

D 1660 Test Method for Thermal Stability of Aviation Turbine Fuels³

D 1840 Test Method for Naphthalene Hydrocarbons in Aviation Turbine Fuels by Ultraviolet Spectrophotometry²

D 2276 Test Method for Particulate Contaminant in Aviation Fuel by Line Sampling²

D 2386 Test Method for Freezing Point of Aviation Fuels²

D 2622 Test Method for Sulfur in Petroleum Products by Wavelength Dispersive X-Ray Fluorescence Spectrometry²

D 2624 Test Methods for Electrical Conductivity of Aviation and Distillate Fuels²

D 2887 Test Method for Boiling Range Distribution of Petroleum Fractions by Gas Chromatography²

D 3120 Test Method for Trace Quantities of Sulfur in Light Liquid Petroleum Hydrocarbons by Oxidative Microcoulometry²

D 3227 Test Method for Mercaptan Sulfur in Gasoline, Kerosine, Aviation Turbine, and Distillate Fuels (Potentiometric Method)²

D 3240 Test Method for Undissolved Water in Aviation Turbine Fuels⁴

¹ This specification is under the jurisdiction of ASTM Committee D02 on Petroleum Products and Lubricants and is the direct responsibility of Subcommittee D02.J0 on Aviation Fuels.

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² Annual Book of ASTM Standards, Vol 05.01.

³ Discontinued and replaced by Test Method D 3241. See 1993 Annual Book of ASTM Standards, Vol 05.02.

⁴ Annual Book of ASTM Standards, Vol 05.02.