Designation: D 3699 – 02

An American National Standard

Standard Specification for Kerosine[1]

This standard is issued under the fixed designation D 3699; 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 two grades of kerosine suitable for use in critical kerosine burner applications:

1.1.1 *No. 1-K*—A special low-sulfur grade kerosine suitable for use in nonflue-connected kerosine burner appliances and for use in wick-fed illuminating lamps.

1.1.2 *No. 2-K*—A regular grade kerosine suitable for use in flue-connected burner appliances and for use in wick-fed illuminating lamps.

1.2 This specification is intended for use in purchasing, as a reference for industry and governmental standardization, and as a source of technical information.

1.3 This specification, unless otherwise provided by agreement between the purchaser and the supplier, prescribes the required properties of kerosine at the time and place of custody transfer.

1.4 Nothing in this specification shall preclude observance of federal, state, or local regulations which can be more restrictive.

1.5 All values are stated in SI units and are regarded as the standard.

NOTE 1—The generation and dissipation of static electricity can create problems in the handling of kerosines. For more information on the subject, see Guide D 4865.

2. Referenced Documents

2.1 *ASTM Standards:*

D 56 Test Method for Flash Point by Tag Closed Tester[2]

D 86 Test Method for Distillation of Petroleum Products at Atmospheric Pressure[2]

D 130 Test Method for Detection of Copper Corrosion from Petroleum Products by the Copper Strip Tarnish Test[2]

D 156 Test Method for Saybolt Color of Petroleum Products (Saybolt Chromometer Method)[2]

D 187 Test Method for Burning Quality of Kerosine[2]

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

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

D 2386 Test Method for Freezing Point of Aviation Fuels[2]

D 2622 Test Method for Sulfur in Petroleum Products by Wavelength Dispersive X-Ray Fluorescence Spectrometry[2]

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

D 3828 Test Methods for Flash Point by Small Scale Closed Tester[3]

D 4294 Test Method for Sulfur in Petroleum and Petroleum Products by Energy Dispersive X-Ray Fluorescence Spectrometry[3]

D 4865 Guide for Generation and Dissipation of Static Electricity in Petroleum Fuel Systems[3]

D 4952 Test Method for Qualitative Analysis for Active Sulfur Species in Fuels and Solvents (Doctor Test)[3]

D 5453 Test Method for Determination of Total Sulfur in Light Hydrocarbons, Motor Fuels and Oils by Ultraviolet Fluorescence[4]

D 5901 Test Method for Freezing Point of Aviation Fuels (Automatic Optical Method)[4]

D 5972 Test Method for Freezing Point of Aviation Fuels (Automatic Phase Transition Method)[4]

D 6469 Guide for Microbial Contamination in Fuels and Fuel Systems[5]

2.2 *IP Standard:*

IP 10 Burning Test—24 Hour[6]

3. General Requirements

3.1 Kerosine shall be a refined petroleum distillate consisting of a homogeneous mixture of hydrocarbons essentially free of water, inorganic acidic or basic compounds, and excessive amounts of particulate contaminants. Additive usage can be

[1] This specification is under the jurisdiction of ASTM Committee D02 on Petroleum Products and Lubricants and is the direct responsibility of Subcommittee D02.E0 on Burner, Diesel, Non-Aviation Gas Turbine, and Marine Fuels.

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[2] *Annual Book of ASTM Standards*, Vol 05.01.

[3] *Annual Book of ASTM Standards*, Vol 05.02.

[4] *Annual Book of ASTM Standards*, Vol 05.03.

[5] *Annual Book of ASTM Standards*, Vol 05.04.

[6] Standard Methods for Analysis and Testing of Petroleum and Related Products, Institute of Petroleum, 61 New Cavendish St., London, W7M 8AR, Vol 1.