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An American National Standard

Standard Specification for Diesel Fuel Oils[1]

This standard is issued under the fixed designation D 975; 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 five grades of diesel fuel oils suitable for various types of diesel engines. These grades are described as follows:

1.1.1 *Grade Low Sulfur No. 1-D*—A special-purpose, light distillate fuel for automotive diesel engines requiring low sulfur fuel and requiring higher volatility than that provided by Grade Low Sulfur No. 2-D.[2]

1.1.2 *Grade Low Sulfur No. 2-D*— A general-purpose, middle distillate fuel for automotive diesel engines requiring low sulfur fuel. It is also suitable for use in non-automotive applications, especially in conditions of varying speed and load.[2]

1.1.3 *Grade No. 1-D*—A special-purpose, light distillate fuel for automotive diesel engines in applications requiring higher volatility than that provided by Grade No. 2-D fuels.

1.1.4 *Grade No. 2-D*—A general-purpose, middle distillate fuel for automotive diesel engines, which is also suitable for use in non-automotive applications, especially in conditions of frequently varying speed and load.

1.1.5 *Grade No. 4-D*—A heavy distillate fuel, or a blend of distillate and residual oil, for low- and medium-speed diesel engines in non-automotive applications involving predominantly constant speed and load.

NOTE 1—A more detailed description of the grades of diesel fuel oils is given in Appendix X1.2.

1.2 This specification, unless otherwise provided by agreement between the purchaser and the supplier, prescribes the required properties of diesel fuels at the time and place of delivery.

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

NOTE 2—The generation and dissipation of static electricity can create problems in the handling of distillate diesel fuel oils. For more information on the subject, see Guide D 4865.

1.3 Values are stated in SI units and are regarded as the standard.

2. Referenced Documents

2.1 *ASTM Standards:*

D 56 Test Method for Flash Point by Tag Closed Tester[3]
D 86 Test Method for Distillation of Petroleum Products[3]
D 93 Test Methods for Flash Point by Pensky-Martens Closed Cup Tester[3]
D 97 Test Method for Pour Point of Petroleum Products[3]
D 129 Test Method for Sulfur in Petroleum Products (General Bomb Method)[3]
D 130 Test Method for Detection of Copper Corrosion from Petroleum Products by the Copper Strip Tarnish Test[3]
D 445 Test Method for Kinematic Viscosity of Transparent and Opaque Liquids (and the Calculation of Dynamic Viscosity)[3]
D 482 Test Method for Ash from Petroleum Products[3]
D 524 Test Method for Ramsbottom Carbon Residue of Petroleum Products[3]
D 613 Test Method for Cetane Number of Diesel Fuel Oil[3]
D 976 Test Methods for Calculated Cetane Index of Distillate Fuels[3]
D 1266 Test Method for Sulfur in Petroleum Products (Lamp Method)[3]
D 1319 Test Method for Hydrocarbon Types in Liquid Petroleum Products by Fluorescent Indicator Adsorption[3]
D 1500 Test Method for ASTM Color of Petroleum Products (ASTM Color Scale)[3]
D 1552 Test Method for Sulfur in Petroleum Products (High-Temperature Method)[3]
D 1796 Test Method for Water and Sediment in Fuel Oils by the Centrifuge Method (Laboratory Procedure)[3]
D 2274 Test Method for Oxidation Stability of Distillate Fuel Oil (Accelerated Method)[3]
D 2276 Test Method for Particulate Contaminant in Aviation Fuel by Line Sampling[3]
D 2500 Test Method for Cloud Point of Petroleum Oils[3]
D 2622 Test Method for Sulfur in Petroleum Products by

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

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[2] This fuel complies with 40 CFR Part 80—Regulation of Fuels and Fuel Additives: Fuel Quality Regulations for Highway Diesel Fuel Sold in 1993 and Later Calendar Years.

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

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