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.

Designation: D6227 – 24

Standard Specification for Unleaded Aviation Gasoline Containing a Non-hydrocarbon Component[1]

This standard is issued under the fixed designation D6227; 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.

1. Scope*

1.1 This specification covers Grades UL82 and UL87 unleaded aviation gasolines, which are defined by this specification and are only for use in engines and associated aircraft that are specifically approved by the engine and aircraft manufacturers, and certified by the National Certifying Agencies to use these fuels. Components containing hetro-atoms (oxygenates) may be present within the limits specified.

1.2 A fuel may be certified to meet this specification by a producer as Grade UL82 or UL87 aviation gasoline only if blended from component(s) approved for use in these grades of aviation gasoline by the refiner(s) of such components, because only the refiner(s) can attest to the component source and processing, absence of contamination, and the additives used and their concentrations. Consequently, reclassifying of any other product to Grade UL82 or Grade UL87 aviation gasoline does not meet this specification.

1.3 Appendix X1 contains an explanation for the rationale of the specification. Appendix X2 details the reasons for the individual specification requirements.

1.4 The values stated in SI units are to be regarded as standard. The values given in parentheses after SI units are provided for information only and are not considered standard.

1.5 *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]

D86 Test Method for Distillation of Petroleum Products and Liquid Fuels at Atmospheric Pressure

D130 Test Method for Corrosiveness to Copper from Petroleum Products by Copper Strip Test

D357 Method of Test for Knock Characteristics of Motor Fuels Below 100 Octane Number by the Motor Method; Replaced by D 2700 (Withdrawn 1969)[3]

D381 Test Method for Gum Content in Fuels by Jet Evaporation

D873 Test Method for Oxidation Stability of Aviation Fuels (Potential Residue Method)

D909 Test Method for Supercharge Rating of Spark-Ignition Aviation Gasoline

D910 Specification for Leaded Aviation Gasolines

D1266 Test Method for Sulfur in Petroleum Products (Lamp Method)

D1298 Test Method for Density, Relative Density, or API Gravity of Crude Petroleum and Liquid Petroleum Products by Hydrometer Method

D2386 Test Method for Freezing Point of Aviation Fuels

D2392 Test Method for Color of Dyed Aviation Gasolines

D2622 Test Method for Sulfur in Petroleum Products by Wavelength Dispersive X-ray Fluorescence Spectrometry

D2699 Test Method for Research Octane Number of Spark-Ignition Engine Fuel

D2700 Test Method for Motor Octane Number of Spark-Ignition Engine Fuel

D3120 Test Method for Trace Quantities of Sulfur in Light Liquid Petroleum Hydrocarbons by Oxidative Microcoulometry

D3231 Test Method for Phosphorus in Gasoline

D3237 Test Method for Lead in Gasoline by Atomic Absorption Spectroscopy

[1] This specification is under the jurisdiction of ASTM Committee D02 on Petroleum Products, Liquid Fuels, and Lubricants and is the direct responsibility of Subcommittee D02.J0.02 on Aviation Piston Engine Fuels.

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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.

***A Summary of Changes section appears at the end of this standard**

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