

DEPARTMENT OF AGRICULTURE
Office of the Consumer and Environmental Protection
(As Amended at ARRS, April 13, 2021)

302 KAR 79:012. Motor fuel quality standards and specifications.

RELATES TO: KRS 363.900-363.908, 16 C.F.R. 306.12, 40 C.F.R. 80.27

STATUTORY AUTHORITY: KRS 363.902, 16 C.F.R. 306, 16 C.F.R. 309, 40 C.F.R. 80.27

NECESSITY, FUNCTION, AND CONFORMITY: KRS 363.902 requires the commissioner of the department to implement and administer an inspection and testing program for motor fuels. This administrative regulation establishes motor fuel quality standards and specifications.

Section 1. Motor Fuel Quality Standards and Specifications.

(1) **If a motor fuel quality**~~[When no]~~ standard **does not exist**~~[exists]~~ the department shall designate a test or specification based upon the most widely accepted scientific principles.

(2) If it is demonstrated that some impurity or imperfection exists in a motor fuel product offered for sale that renders it unfit for its intended purposes, the product **shall**~~[may]~~ be subject to a Level 4 Civil Penalty.

(3) These requirements **shall**~~[will]~~ not apply to any bulk fuel storage tanks where the product contained therein is being reconditioned and withheld from sale.

(4) Motor fuel containing less than one (1) percent by volume oxygenate, not dispensed from a dedicated hose, shall be subject to a Level 2 Civil Penalty.

(5) Gasoline and gasoline-oxygenate blends containing between zero (0) and up to fifteen (15) ~~[volume]~~percent **by volume** ethanol shall **comply with paragraphs (a) through (f) of this subsection**~~[meet the following requirements:]~~

(a) Gasoline and gasoline-oxygenate blends shall not be offered for retail sale under the name "premium" or "super" gasoline blends unless its AKI is greater than or equal to ninety-one (91).

(b) Gasoline and gasoline-oxygenate blends shall not be offered for retail sale under the name "plus" or "mid-grade" gasoline unless its AKI is greater than or equal to eighty-nine (89).

(c) Gasoline and gasoline-oxygenate blends shall not be offered for retail sale under the name "regular" gasoline unless its AKI is greater than or equal to eighty**seven (87)**~~[six (86)]~~.

(d) Pursuant to KRS 363.902(2), gasoline and gasoline-oxygenate blends offered for sale at a retail facility shall conform to the most recent version of ASTM D4814, ~~[“]Standard Specification for Automotive Spark Ignition Engine Fuel,~~~~[“] with the following exceptions, as required by KRS 363.904(2):~~

1. For gasoline-ethanol blends containing between one (1) percent by volume and fifteen (15) percent ~~[ethanol]~~ by volume **ethanol**, the ASTM International V/L ratio specification shall be waived; and~~[.]~~

2. For gasoline-ethanol blends containing **up to**~~[between nine (9) percent and]~~ fifteen (15) percent by volume ethanol, the RVP shall be increased by one (1) pound per square inch.

(e) The maximum concentration of oxygenates permitted in gasoline-oxygenate blends shall be those permitted by the EPA ~~[section 211 of the]~~under Clean Air Act, **42 U.S.C. 7545**, and applicable waivers **or with not more than sixteen (16/%) percent Isobutanol**~~[as set forth in the published version of the NIST Handbook 130 for Gasoline and Gasoline-Oxygenate Blends and for Gasoline-Ethanol blends]~~.

(f) For gasoline and gasoline-oxygenate blends the Motor Octane Number (MON) shall not be less than eighty-two (82).

(6) Mid-level ethanol flex fuel blends containing between sixteen (16) and fifty (50) percent ~~ethanol~~ by volume ethanol, shall meet the latest version of ASTM D7794, ~~[""]~~ Standard Practice for Blending Mid-Level Ethanol Fuel blends for Flexible-Fuel Vehicles with Automotive Spark-Ignition Engines. ~~[""; and]~~

(7) Ethanol flex fuel blends containing between fifty-one (51) and eighty-three (83) percent ~~[ethanol]~~ by volume ethanol shall be blended, stored, and conveyed for consumption in accordance with the latest version of ASTM D5798, ~~[""]~~ Standard Specification for Ethanol Fuel Blends for Flexible-Fuel Automotive Spark-Ignition Engines. ~~[""]~~

(8) M-85 Fuel Methanol shall meet the requirements established~~[set forth]~~ in the most recent version of ASTM D5797, ~~[""]~~ Standard Specification for Fuel Methanol M51-M85 for Automotive Spark-Ignition Engines. ~~[""]~~

(9) Diesel fuel that contains not more than five (5) percent by volume biodiesel or biomass-Based diesel shall meet the requirements established~~[set forth]~~ in the latest version of ASTM D975, ~~[""]~~ Standard Specification for Diesel Fuel. ~~[""]~~

(10) All diesel fuels identified on retail dispensers and product transfer documentation with terms such as "premium," "super," "supreme," "plus," or "premier" shall meet the requirements established~~[set forth]~~ in the published version of the NIST Handbook 130 §2.2.1 for Premium Diesel Fuel.

(11) Diesel fuel that contains biodiesel between six (6) percent and twenty (20) percent, by volume, shall meet the requirements established~~[set forth]~~ in the latest version of ASTM D7467, ~~[""]~~ Standard Specification for Diesel Fuel Oil, Biodiesel Blend (B6 to B20). ~~[""]~~

(12) Biodiesel fuel blend stock intended for blending with diesel fuel shall meet the requirements established~~[set forth]~~ in the most recent version of ASTM D6751, ~~[""]~~ Standard Specification for Biodiesel Fuel Blend Stock (B100) for Middle Distillate Fuels. ~~[""]~~

(a) Biodiesel fuel blend stock shall be at least ninety-nine (99) percent biodiesel but no more than one (1) percent by volume diesel fuel ~~[by volume]~~.

(b) Biodiesel fuel blend stock with less than ninety-nine (99) percent biodiesel shall not be used as a commercial blend stock for biodiesel blends without written notification~~[approval]~~ from the department.

(13) Aviation turbine fuels shall meet the requirements established~~[set forth]~~ in the most recent version of the following standards, as applicable:

(a) ASTM D1655, ~~[""]~~ Standard Specification for Aviation Turbine Fuels; ~~[""]~~

(b) ASTM D7223, ~~[""]~~ Standard Specification for Aviation Certification Turbine Fuel; ~~[""]~~

(c) ASTM D7566, ~~[""]~~ Standard Specification for Aviation Turbine Fuel Containing Synthesized Hydrocarbons; ~~[""]~~ and

(d) ASTM D6615, ~~[""]~~ Standard Specification for Jet B Wide-Cut Aviation Turbine Fuel. ~~[""]~~

(14) Aviation gasoline shall meet the most recent version of the following standards, as applicable:

(a) ASTM D910, ~~[""]~~ Standard Specification for Leaded Aviation Gasoline; ~~[""]~~

(b) ASTM D6227, ~~[""]~~ Standard Specification for Unleaded Aviation Gasoline Containing a Non-hydrocarbon Component; ~~[""]~~ and

(c) ASTM D7547, ~~[""]~~ Standard Specification for Unleaded Only Aviation Gasoline. ~~[""]~~

(15) Liquefied petroleum gases intended for use as motor fuel shall meet the requirements established~~[set forth]~~ in the most recent version of ASTM D1835, ~~[""]~~ Standard Specification for Liquefied Petroleum (LP) Gases. ~~[""]~~

(16) Racing Gasoline shall meet the requirements established~~[set forth]~~ in the gasoline manufacturer's product specifications. Upon the request of the department, each conveyor of racing gasoline shall provide the department with a copy of the manufacturer's product specifications.

(17) Hydrogen fuel for fuel cell vehicles shall meet the requirements established~~[set forth]~~ in the most recent edition of SAE J2719 Hydrogen Fuel Quality for Fuel Cell Vehicles. If ASTM International develops applicable standards for Hydrogen Fuel Quality, those standards shall prevail as rule.

(18) Compressed natural gas shall meet the requirements established~~[set forth]~~ in the most recent edition of SAE J1616, ~~["Recommended Practice for Compressed Natural Gas Vehicle Fuel, [at such time that]~~ If ASTM International develops applicable standards for compressed natural gas, those standards shall prevail as rule.

(19) LNG vehicle fuel shall meet the requirements established~~[set forth]~~ in the most recent edition of SAE J2699 ~~["Liquefied Natural Gas Vehicle Fuel, [At such time that]~~ If ASTM International develops applicable standards for LNG vehicle fuels, those standards shall prevail as rule.

Section 2. Incorporation by Reference.

(1) The following material is incorporated by reference:

(a) "ASTM Standard D910-20a, (ASTM D910), Standard Specification for Leaded Aviation Gasolines", (2020);

(b) "ASTM Standard D975-20c, (ASTM D975), Standard Specification for Diesel Fuel", (2020);

(c) "ASTM Standard D1655-20~~d~~**[e]**, (ASTM D1655), Standard Specification for Aviation Turbine Fuels", (2020);

(d) "ASTM Standard D1835-20, (ASTM D1835), Standard Specification for Liquefied Petroleum (LP) Gases", (2020);

(e) "ASTM Standard D4806-20, (ASTM D4806), Standard Specification for Denatured Fuel Ethanol for Blending with Gasolines for Use as Automotive Spark Ignition Engine Fuel", (2020);

(f) "ASTM Standard D4814-~~21~~**[20a]** (ASTM D4814), Standard Specification for Automotive Spark Ignition Engine Fuel", (2021);

(g) "ASTM Standard D5797-18, (ASTM D5797), Standard Specification for Methanol Fuel Blends (M51–M85) for Methanol-Capable Automotive Spark-Ignition Engines", (2018);

(h) "ASTM Standard D5798-20, (ASTM D5798), Standard Specification for Ethanol Fuel Blends for Flexible-Fuel Automotive Spark-Ignition Engines", (2020);

(i) "ASTM Standard D6227-18, (ASTM D6227), Standard Specification for Unleaded Aviation Gasoline Containing a Non-hydrocarbon Component", (2018);

(j) "ASTM Standard D6615-15a, (ASTM D6615), Standard Specification for Jet B Wide-Cut Aviation Turbine Fuel", (2019);

(k) "ASTM Standard D6751-20a, (ASTM D6751), Standard Specification for Biodiesel Fuel Blend Stock (B100) for Middle Distillate Fuels", (2020);

(l) "ASTM Standard D7223-17, (ASTM D7223), Standard Specification for Aviation Certification Turbine Fuel", (2017);

(m) "ASTM Standard D7467-20a, (ASTM D7467), Standard Specification for Diesel Fuel Oil, Biodiesel Blend (B6 to B20)", (2020);

(n) "ASTM Standard D7547-18a, (ASTM D7547), Standard Specification for Hydrocarbon Unleaded Aviation Gasoline", (2018);

(o) "ASTM Standard D7566-20~~c~~**[b]**, (ASTM D7566), Standard Specification for Aviation Turbine Fuel Containing Synthesized Hydrocarbons", (2020);

(p) "ASTM Standard D7794-20, (ASTM D7794), Standard Practice for Blending Mid-Level Ethanol Fuel Blends for Flexible-Fuel Vehicles with Automotive Spark-Ignition Engines", (2020);

(q) "ASTM Standard D7901-20, (ASTM D7901), Standard Specification for Dimethyl Ether for Fuel Purposes", (2020);

(r) "National Institute of Standards and Technology Handbook 130, 2020 Edition Natl. Inst. Stand. Technol. Handb. 130, 2020 Ed., Uniform Fuels and Automotive Lubricants Regulation, IV, G, §2; (Nov. 2019)"

(s) "SAE J1616-201703, Standard for Compressed Natural Gas Vehicle Fuel, Society of Automotive Engineers International", (2017);

(t) "SAE J2699-201802, Liquefied Natural Gas (LNG) Vehicle Fuel, Society of Automotive Engineers International", (2018); and

(u) "SAE J2719-202003, Hydrogen Fuel Quality for Fuel Cell Vehicles, Society of Automotive Engineers International," (2020).

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