

Sec. 14-327d-2. Standard specifications of motor fuel

(a) The commissioner adopts by reference ASTM D-4814 “Standard Specifications for Automotive Spark-Ignition Engine Fuel” for gasoline, with the following modifications:

(1) The minimum lead content for gasoline registered and/or labeled as “leaded” shall be as defined in section 14-327d-1(32) of the Regulations of Connecticut State Agencies;

(2) Reid vapor pressure and vapor/liquid ratio seasonal specifications shall be as listed in the Connecticut Department of Environmental Protection Regulations, section 22a-174-20(a)(5) of the Regulations of Connecticut State Agencies;

(3) Octane rating or Antiknock Index shall not be less than the Octane Index certified on the Form of Registration for Spark Ignition Motor Fuel required by section 14-327b of the Connecticut General Statutes; and

(4) The minimum Octane or Antiknock Index $(R + M)/2$ of gasoline offered for sale shall not be less than the following:

(A) Economy Unleaded 86;

(B) Regular Unleaded 87;

(C) Regular Leaded 89;

(D) Mid Grade, Plus Unleaded 89;

(E) Premium, Super, Supreme, High-Test Unleaded 91;

(F) Premium Leaded 93; and

(G) Racing Leaded or Racing Unleaded 100.

(5) Minimum Antiknock Index (AKI) shall not be less than the AKI posted on the product dispenser or as certified on the invoice, bill of lading, shipping paper, or other documentation;

(6) Minimum Motor Octane Number shall not be less than 82 for gasoline with an AKI of 87 or greater;

(7) Lead Substitute Gasoline and gasoline-oxygenate blends sold as “lead substitute” gasoline shall contain a lead substitute which provides protection against exhaust valve seat recession equivalent to at least 0.026g of lead per liter (0.10 g per U.S. gal).

(b) The commissioner hereby adopts by reference ASTM D-4814, “Standard Specification for Automotive Spark-Ignition Engine Fuel” as standard specification for gasoline-oxygenate blends, with the following modifications:

(1) Gasoline blended with ethanol shall be blended under any of the following two options:

(A) The base gasoline used in such blends shall meet the requirements of ASTM D-4814, or

(B) The blend shall meet the requirements of ASTM D-4814;

(2) A vapor pressure test tolerance not exceeding one (1.0) pound per square inch may be allowed for gasoline-oxygenate blends;

(3) Reid vapor pressure and vapor/liquid ratio seasonal specifications as listed in the Connecticut Department of Environmental Protection Regulation, section 22a-174-20(a)(5) of the Regulations of Connecticut State Agencies;

(4) Distillation range — the minimum temperature at fifty percent (50%) evaporated shall be 65.6 degrees C (150 degrees F) as determined by ASTM Test Method D-86;

(5) The minimum lead content for gasoline-oxygenate blends registered and/or labeled

as “leaded” shall be as defined in section 14-327d-1(32) of the Regulations of Connecticut State Agencies;

(6) Octane rating or Antiknock Index shall not be less than the octane index certified on the Form of Registration for Spark Ignition Motor Fuel required by section 14-327b of the Connecticut General Statutes;

(7) The minimum Octane or Antiknock Index, $(R + M)/2$ of gasoline-oxygenate blends offered for sale shall not be less than the following:

- (A) Economy Unleaded 86;
- (B) Regular Unleaded 87;
- (C) Regular Leaded 89;
- (D) Mid Grade, Plus Unleaded 89;
- (E) Premium, Super, Supreme, High-Test Unleaded 91;
- (F) Premium Leaded 93; and
- (G) Racing Leaded or Racing Unleaded 100.

(8) Minimum Antiknock Index (AKI) shall not be less than the AKI posted on the product dispenser or as certified on the invoice, bill of lading, shipping paper, or other documentation;

(9) Minimum Motor Octane Number shall not be less than 82 for gasoline with an AKI of 87 or greater;

(10) Lead Substitute Gasoline and gasoline-oxygenate blends sold as “lead substitute” gasoline shall contain a lead substitute which provides protection against exhaust valve seat recession equivalent to at least 0.026g of lead per liter (0.10 g per U.S. gal);

(11) Gasohol and leaded gasohol shall contain ten (10) plus/minus 0.5 volume percent denatured fuel ethanol;

(12) Gasoline-oxygenate blends not otherwise defined in section 14-327d-1 of the Regulations of Connecticut State Agencies, may contain, maximum or minimum as appropriate, the percentage and type of oxygenates as certified on the registration as required by Form of Registration for Spark-Ignition Motor Fuel required by section 14-327b of the Connecticut General Statutes subject to compliance with other specifications as provided in this section.

(c) The commissioner hereby adopts by reference, ASTM D-975, “Standard Specification for Diesel Fuel Oils” as standard specification for diesel motor fuels.

(d) Leaded, lead substitute, and unleaded gasoline-oxygenate blends shall be blended according to the EPA “substantially similar” rule or an EPA waiver for unleaded fuel.

(e) The commissioner hereby adopts by reference, ASTM D-6751, “Standard Specification for Biodiesel Fuel (B100) Blend Stock for Distillate Fuels”.

(f) Biodiesel Blends, meaning blends of biodiesel and diesel fuels, shall meet the following requirements:

(1) The diesel fuel blend stock shall meet the most current requirements of ASTM D-975, Standard Specification for Diesel Fuel Oils;

(2) The biodiesel blend stock shall meet the most current requirements of ASTM D-6751, Standard Specification for Biodiesel Fuel (B100) Blend Stock for Distillate Fuels.

(3) Except that biodiesel may be blended with diesel fuel whose sulfur or aromatic levels are outside specification ASTM D-975, Standard Specification for Diesel Fuel Oils, grades

1-D, low sulfur 1-D, 2-D, or low sulfur 2-D provided the finished mixture meets ASTM D-975 requirements for these properties.

(g) Premium diesel fuel shall conform to the following requirements:

(1) Cetane number - A minimum cetane number of 47.0 as determined by ASTM Standard Test Method D-613;

(2) Low temperature operability - A cold flow performance measurement which meets the ASTM D-975 tenth percentile minimum ambient air temperature charts and maps by either ASTM Standard Test Method D-2500 (Cloud Point) or ASTM Standard Test Method D-4539 (Low Temperature Flow Test, LTFT). Low temperature operability requirements are only applicable from October 1 through March 31 of each year;

(3) Thermal stability - A minimum reflectance measurement of eighty percent (80%) as determined by ASTM Standard Test Method D-6468 (180 minutes, 150°C); and

(4) Lubricity – A maximum wear scar diameter of 520 microns as determined by ASTM D-6079. If an enforcement jurisdiction’s single test indicates a wear scar diameter of more than 560 microns, a second test shall be conducted. If the average result of the two tests is more than 560 microns, the sample does not conform to the requirements of this part;

(h) Fuel oils shall meet the most recent version of ASTM D-396, “Standard Specification for Fuel Oils.”

(i) Ethanol intended for blending with gasoline shall meet the most recent version of ASTM D-4806, “Standard Specification for Denatured Fuel Ethanol for Blending with Gasolines for Use as Automotive Spark-Ignition Engine Fuel.”

(j) E85 Fuel Ethanol shall meet the most recent version of ASTM D-5798, “Standard Specification for Fuel Ethanol (Ed75-Ed85) for Automotive Spark-Ignition Engines.”

(k) M85 Fuel Methanol shall meet the most recent version of ASTM D-5797, “Standard Specification for Fuel Methanol (M70-M85) for Automotive Spark Ignition Engines.”

(l) In addition to meeting all specification requirements as set forth in section 14-327d-1 to section 14-327d-11, inclusive, of the Regulations of Connecticut State Agencies, each fuel must be suitable for the intended use.

(m) ASTM documents adopted by reference herein are available for inspection in the Office of the Director of the Food and Standards Division and may be obtained by contacting the director.

(n) The commissioner, upon making a determination that the implementation of an ASTM fuel standard has the potential to result in a fuel shortage, may delay implementation of the ASTM standard for up to one year subsequent to the formal promulgation date by ASTM.

(Effective April 29, 1992; Amended November 4, 2004; Amended December 4, 2008)