

## **MOTOR FUEL QUALITY TESTING STANDARDS**

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### **Sec. 14-327d-1. Definitions**

As used in Sections 14-327d-1 to 14-327d-10, inclusive:

- (a) "ASTM" means the American Society for Testing and Materials.
- (b) "Approved denaturant(s)" means materials used for denaturing ethyl alcohol for use as a motor fuel which have been approved by the U.S. Department of the Treasury, Bureau of Alcohol, Tobacco and Firearms and the Director.
- (c) "Approved lead substitute" means an EPA registered gasoline additive formulated to reduce valve seat recession in engines designed to operate on leaded gasoline and which has been approved by the Director. Such approval shall be based upon the submission of scientific documentation acceptable to the Director.
- (d) "Cetane number" means the relative ignition quality of diesel fuels determined by the ASTM Cetane Method D-613.
- (e) "Commissioner" means the Commissioner of Consumer Protection.
- (f) "Denatured fuel ethanol" means ethanol meeting the provisions of ASTM D-4806, "Standard Specification for Denatured Fuel Ethanol to be Blended with Gasolines for Use as an Automotive Spark-Ignition Engine fuel."
- (g) "Director" means the Director of the Weights and Measures Division of the Department of Consumer Protection.
- (h) "Distributor" means any person who imports or causes to be imported into this state motor fuel for sale or use in this state or any person who produces, refines, blends, manufactures or compounds motor fuels within this state for sale or use in this state and includes any affiliate of either such person who purchases motor fuel for sale, consignment, or distribution to another or receives motor fuel on consignment for consignment or distribution to his own motor fuel accounts or to accounts of his supplier, but does not include any person who is an employee of, or merely serves as a common carrier providing transportation service for, such supplier.
- (i) "EPA" means the United States Environmental Protection Agency.
- (j) "Gasoline-oxygenate blend" means a blend consisting primarily of gasoline and a substantial amount of one or more oxygenates. This definition includes, but is not limited to, the following

designations:

(1) Gasohol meaning any motor fuel containing a nominal ten volume percent anhydrous denatured ethanol and 90 volume percent unleaded gasoline, regardless of other name, label, or designation.

(2) Any gasoline-oxygenate blend which meets the EPA's "Substantially Similar" rule.

(3) Any gasoline-oxygenate blend for which there is an existing Clean Air Act waiver issued by EPA.

(4) Any gasoline-oxygenate blend which is not subject to EPA fuel requirements, but for which approval has been granted by the Department of Consumer Protection.

(k) "Leaded" means any gasoline or gasoline-oxygenate blend which contains not less than 0.05 gram lead per U.S. gallon (0.013 gram lead per liter) or contains an approved lead substitute which provides a lead equivalent of at least 0.10 gram lead per U.S. gallon (0.026 gram per liter).

(l) "Motor fuel" means (1) all products commonly or commercially known or sold as gasoline, including casinghead and absorption or natural gasoline, regardless of their classification or uses, and (2) any liquid prepared, advertised, offered for sale or sold for use, or commonly and commercially used, as a fuel in internal combustion engines, including any liquid commonly referred to as "gasohol" which is prepared, advertised, offered for sale or sold for use, or commonly and commercially used, as fuel in internal combustion engines, but excluding aviation fuel and liquified petroleum gases.

(m) "Motor Octane Number" means the number describing the relative anti-knock characteristic of a motor fuel determined by ASTM Motor Method (D-2700).

(n) "Octane Index" means the number obtained by adding the research octane number and the motor octane number and dividing the sum by two.

(o) "Oxygenate" means an oxygen containing ashless organic compound, such as an alcohol or an ether, which may be used as a fuel or a fuel supplement.

(p) "Oxygenated fuel" means a liquid which is a homogeneous blend of hydrocarbons and oxygenates.

(q) "Qualitative word or term" means any word or term used in a brand name which by definition or customary usage indicates a level of quality, classification, grade, or designation.

(r) "Research Octane Number" means the number describing the relative antiknock characteristic of a motor fuel determined by ASTM Research Method (D-2699).

(s) "Retailer" means any person engaged in the business of selling motor fuel to the general public for ultimate consumption.

(t) "Substantially Similar" rule means the U.S. Environmental Protection Agency's "Substantially Similar" rule, Section 211 (f) (1) of the Clean Air Act (42 U.S.C. 7545 (f) (1)).

(u) "Total alcohol" means the aggregate total in volume percent of all alcohol contained in any fuel defined in this Chapter.

(v) "Total oxygenate" means the aggregate total in volume percent of all oxygenates contained in any fuel defined in this Regulation.

(w) "Unleaded" means any gasoline or gasoline-oxygenate blend to which no lead or phosphorus compounds have been intentionally added and which contains not more than 0.05 gram lead per U.S. gallon (0.013 gram lead per liter) and not more than 0.005 gram phosphorus per U.S. gallon (.0013 gram phosphorus per liter).

(Effective April 29, 1992.)

**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.

(1) The minimum lead content for gasoline registered or labeled, or both, as "leaded" or "regular" shall be as defined in section 14-327d-1(k) of the Regulations of Connecticut State Agencies.

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

(3) Octane rating 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.

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

(A) Regular Unleaded 87;

(B) Regular Leaded 89;

(C) Mid Grade Unleaded 89;

(D) Premium Unleaded 91; and

(E) Premium Leaded 93.

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

(1) A vapor pressure test tolerance not exceeding 0.5 pounds per square inch may be allowed for gasohol, leaded gasohol, and gasoline-oxygenate blends;

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

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

(4) The minimum lead content for gasoline/oxygenate blends registered or labeled, or both, as "leaded" or "regular" shall be as defined in section 14-327d-1(k) of the Regulations of Connecticut State Agencies;

(5) Octane rating 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;

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

(A) Regular Unleaded 87;

(B) Regular Leaded 89;

(C) Mid Grade Unleaded 89;

(D) Premium Unleaded 91; and

(E) Premium Leaded 93.

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

(8) Gasoline-oxygenate blends not otherwise defined in the regulations, 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; and

(9) The Commissioner hereby adopts by reference, ASTM D-975, "Standard Specification for Diesel Fuel Oils" as standard specification for diesel motor fuels with the following modification: For diesel motor fuel grade 2-D, the minimum flash point as determined by ASTM Test Method D-56 shall be 115 degrees F. (46 degrees C.).

(c) In addition to meeting all specification requirements as set forth in these regulations, each fuel must be suitable for the intended use.

(d) 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.

(Added effective April 29, 1992; Amended effective November 4, 2004.)

#### **Sec. 14-327d-3. Quality of motor fuels**

(a) A motor fuel shall be of the quality specifications as registered with the Commissioner.

(b) If any quality specification is displayed on a dispenser or in any public location where motor fuel is sold and said specification exceeds the quality specifications registered, the displayed specification shall become the legal minimum for all motor fuels so labeled or advertised.

(c) Any octane number or rating displayed shall be the octane index and no other number or rating.

(d) All other specifications displayed must be identified by name or designation except that the octane index may be used as part of a brand name after compliance with Public Act 91-322.

(Effective April 29, 1992.)

#### **Sec. 14-327d-4. Sale of gasoline**

(a) All gasoline sold at wholesale or retail in Connecticut shall be sold under the label, name, or brand name under which the gasoline was first purchased for resale in Connecticut, except as provided in subsection (b) of this section.

(b) The owner of any gasoline purchased for sale or resale in Connecticut may sell such gasoline under a label, name, or brand other than that under which the gasoline was purchased provided

that the new label, name, or brand is filed with the Commissioner.

(Effective April 29, 1992.)

**Sec. 14-327d-5. Evidence of original purchase**

The invoice, bill of sale, bill of lading, terminal ticket, or other evidence of the purchase of gasoline, including but not limited to computer produced documents, shall state the name and address of the seller and buyer, the date and time of sale, the label, name or brand under which it was sold and the number of gallons sold. All such evidence of purchase shall be signed in ink or other indelible substance by the seller.

(Effective April 29, 1992.)

**Sec. 14-327d-6. Labeling of dispensing devices**

(a) For the purpose of product identity, each dispensing device used in the retailing of any motor fuel shall be plainly and conspicuously labeled with the following:

- (1) for gasoline, the registered brand name;
- (2) for diesel fuel, the registered brand name plus a descriptive or generic label if the registered brand name does not adequately identify the type and/or grade of product;
- (3) for gasoline-oxygenate blends containing at least one percent by volume of ethanol, methanol, or combination, the registered brand name plus an additional label which states that the blend "contains ethanol," "contains methanol," or "contains methanol/cosolvent."

(b) Labels shall be consistent with Section 16a-15-8(c) of the Regulations of Connecticut State Agencies:

- (1) for fuels not covered by an EPA waiver, the additional label shall identify the percent by volume of ethanol and/or methanol in the blend.
- (2) if a dispenser is so designed that two or more hose/nozzles which are connected to a common housing dispense more than one type or grade of product, means shall be provided to clearly indicate the identity of the product being dispensed from each hose/nozzle.

(Effective April 29, 1992.)

**Sec. 14-327d-7. Registration and branding**

(a) All motor fuels offered for sale, sold or delivered to a purchaser in the State of Connecticut

shall be branded, and each and every brand name shall be registered, together with quality specifications, with the Commissioner on forms provided by the Director. In her discretion, the Commissioner:

(1) May require written certification or other satisfactory evidence of compliance for any motor fuel which is subject to federal waiver requirements or other applicable laws or regulations; and

(2) May require any person desiring to register a motor fuel for which there exists no generally recognized classification, basic quality standards, or performance record, to submit, in writing, the following:

(A) Certified test data and performance evaluations; and

(B) Detailed chemical and physical characteristics.

(b) This information shall be from independent sources of recognized qualification or otherwise satisfactory to the Commissioner, and shall be submitted before an application for registration will be considered.

(c) Any brand name registration under this section shall in no way supersede federal Trademark Law.

(Effective April 29, 1992.)

**Sec. 14-327d-8. Octane range number of commercial gasoline**

No number within the octane range of commercial gasolines shall be used as a prefix, suffix, or any part of a brand name, unless the registered octane index is at least equivalent to said number.

(Effective April 29, 1992.)

**Sec. 14-327d-9. Cetane range of commercial diesel fuels**

No number within the cetane range of commercial diesel fuels shall be used as a prefix, suffix, or any part of a brand name, unless the registered cetane number is at least equivalent to said number.

(Effective April 29, 1992.)

**Sec. 14-327d-10. Registration provisions**

(a) Any person who registered a brand name for a motor fuel and fails to or discontinues to sell

or deliver the registered product shall notify the Commissioner within 60 days after registration or last invoice or delivery ticket. Failure to notify shall automatically terminate and cancel the registration of the brand name and the quality specifications.

(b) The Commissioner may establish and maintain a normal prevailing range of quality specifications of motor fuels for similar or customary classifications, grades, or designations of motor fuels intended for the same use or application. For automotive gasolines and gasoline/oxygenate blends, the minimum octane index shall be 87. For those designated as "Mid-Grade" or "Premium" or by a word or term of equivalent meaning, the minimum octane index shall be 89 and 91 respectively.

(Effective April 29, 1992.)

**Sec. 14-327d-11. Weights and measures sampling procedure for motor fuel octane and oxygenated levels**

**(a) Containers and Seals**

Departmental inspectors shall use uncontaminated one-gallon steel containers, soldered on the outside to prevent contamination of the sample to obtain octane samples. Each container shall have an uncontaminated metal security seal. Departmental inspectors shall use uncontaminated one-pint aluminum containers, soldered on the outside to prevent contamination of the sample to obtain oxygenate samples. Each container shall have an uncontaminated plastic security seal. Each container shall have an official State of Connecticut sticker containing a sample number.

**(b) Collection of Samples**

All samples shall be drawn from the dispenser nozzle. For octane testing the inspector shall draw 0.8 gallons. For oxygenate testing the inspector shall draw 0.09 gallons. When drawing samples from blend dispensers or any dispenser with multiple products available from a single shared nozzle the inspector shall flush 0.5 gallons through the dispenser before drawing the sample. After obtaining the samples the inspector shall fill out a report form provided by the department. The inspector shall have the person in charge of the station at the time of the inspection sign a copy of the report. The inspector shall give the person in charge of the station at the time of the inspection a copy of the signed report. After each sample is taken the inspector shall place the container in a locked plastic cooler that is kept in the inspector's vehicle.

**(c) Transportation and Storage of Samples**

At the end of the day the inspector shall deliver the samples to the testing laboratory and shall obtain a receipt from the laboratory showing the date brought to the laboratory, the condition of each sample and the sample number. In lieu of bringing the samples to the testing laboratory the inspector may bring the samples back to the department where the samples shall be logged in and



stored in a suitable locked area for future pick-up by the laboratory.

**(d) Custody of Stored Samples**

When picking up the samples from the department the laboratory shall give the departmental employee making the transfer a receipt showing the date picked up by the laboratory, the condition of each sample and the sample number. The laboratory shall provide to the department on a monthly basis a report showing the chain of custody for each sample from pick up to testing by the laboratory.

**(e) Laboratory Reports**

If the sample fails to pass the minimum standards or levels a retest shall be made. The laboratory shall notify the department of the results of each test for each sample in writing. The department may require the laboratory to send by facsimile transmittal the results when a sample fails both tests. The sample shall fail the test if the octane level is 0.7 octane less than the posted figure for the product being tested.

(Added effective December 6, 1995.)