

214A.2 Standards and classifications.

1. a. The department shall adopt rules establishing departmental standards relating to motor fuels and motor fuel components.

b. In the interest of uniformity, the department shall adopt by reference in part or in whole, as some of its departmental standards described in paragraph “a”, applicable specifications adopted by ASTM international and applicable requirements established by the United States environmental protection agency.

2. Octane number shall conform to the average of values obtained from the ASTM international D2699 research method and the ASTM international D2700 motor method.

a. Octane number for regular grade unleaded gasoline shall follow the specifications of ASTM international but shall not be less than eighty-seven.

b. Octane number for premium grade unleaded gasoline shall follow the specifications of ASTM international but shall not be less than ninety-one.

3. a. For motor fuel advertised for sale or sold as gasoline by a dealer, the motor fuel must meet requirements for that type of motor fuel and its additives established by the United States environmental protection agency including as provided under 42 U.S.C. §7545.

b. If the motor fuel is advertised for sale or sold as ethanol blended gasoline, the motor fuel must meet departmental standards including as follows:

(1) Ethanol must be an agriculturally derived ethyl alcohol that meets departmental standards based in part or in whole on ASTM international specification D4806 for denatured fuel ethanol for blending with gasoline for use as automotive spark-ignition engine fuel, or a successor ASTM international specification, established by rule.

(2) Gasoline blended with ethanol must meet departmental standards based in part or in whole on ASTM international specification D4814, or a successor ASTM international specification, established by rule.

(3) (a) For ethanol blended gasoline, at least nine percent by volume must be fuel grade ethanol.

(b) For the period beginning on September 16 and ending on May 31 of each year, the state grants a waiver of one pound per square inch from the ASTM international D4814 specification for Reid vapor pressure, or a successor ASTM international specification, established by rule.

(4) For standard ethanol blended gasoline, it must be ethanol blended gasoline classified as any of the following:

(a) From E-9 up to but not higher than E-15, if the ethanol blended gasoline meets the departmental standards for that classification as otherwise provided in this paragraph “b”.

(b) Higher than E-15 but not E-85 gasoline, if the classification is authorized by the department pursuant to approval for the use of that classification of ethanol blended gasoline in this state by the United States environmental protection agency, by granting a waiver or the adoption of regulations.

(5) E-85 gasoline must be an agriculturally derived ethyl alcohol that meets departmental standards based in part or in whole on ASTM international specification D5798, described as a fuel blend for use in ground vehicles with automotive spark-ignition engines, or a successor ASTM international specification, established by rule.

c. If the motor fuel is advertised for sale or sold as biobutanol blended gasoline, the motor fuel must meet departmental standards as follows:

(1) Biobutanol must be an agriculturally derived isobutyl or n-butyl alcohol that meets ASTM international specification D7862 for butanol for blending with gasoline for use as automotive spark-ignition engine fuel, or a successor ASTM international specification, established by rule.

(2) Gasoline blended with biobutanol must meet departmental standards based in part or in whole on ASTM international specification D4814, or a successor ASTM international specification, established by rule.

4. a. For motor fuel advertised for sale or sold as diesel fuel by a dealer, the motor fuel must meet requirements for that type of motor fuel and its additives established by the United States environmental protection agency including as provided under 42 U.S.C. §7545.

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b. If the motor fuel is advertised for sale or sold as biodiesel or biodiesel blended fuel, the motor fuel must meet departmental standards based in part or in whole on specifications adopted by ASTM international for biodiesel or biodiesel blended fuel, to every extent applicable, as determined by the department, subject to the following:

(1) Biodiesel must meet departmental standards based in whole or in part on ASTM international specification D6751, or a successor ASTM international specification, established by rule. The specification shall apply to biodiesel before it leaves its place of manufacture.

(2) At least five percent of biodiesel blended fuel by volume must be biodiesel.

(3) The biodiesel may be blended with diesel fuel whose sulfur, aromatic, lubricity, and cetane levels do not comply with ASTM international specification D975 grades 1-D or 2-D, low sulfur 1-D or 2-D, or ultra-low sulfur grades 1-D or 2-D, provided that the finished biodiesel blended fuel meets departmental standards as required in subparagraph (1).

(4) Biodiesel blended fuel classified as B-6 or higher but not higher than B-20 must meet departmental standards based in whole or in part on ASTM international specification D7467, or a successor ASTM international specification, established by rule.

(5) (a) Biodiesel blended fuel classified as higher than B-20 must conform to standards adopted by the department.

(b) The rules adopted by the department of agriculture and land stewardship establishing standards for biodiesel blended fuel classified as higher than B-20 shall take effect not earlier than sixty days after the date of filing in accordance with [section 17A.5, subsection 2](#), paragraph “a”. The department of agriculture and land stewardship shall notify the legislative services agency, the governor, the department of natural resources, and the department of revenue of the effective date of the rules at least thirty days prior to the effective date of the rules.

c. (1) If the motor fuel is advertised for sale or sold as renewable diesel or renewable diesel blended fuel, the motor fuel must meet departmental standards based in part or in whole on specifications adopted by ASTM international for renewable diesel or renewable diesel blended motor fuel, to every extent applicable, as determined by the department subject to subparagraph (2).

(2) Renewable diesel must at least meet departmental standards based in whole or in part on ASTM international specification D975, or a successor ASTM international specification, established by rule. The specification shall apply to renewable diesel before it leaves its place of manufacture.

5. Motor fuel shall be classified as follows:

a. (1) Ethanol shall be classified as E-100.

(2) Ethanol blended gasoline formulated with a percentage of between sixty-eight and eighty-three percent by volume of ethanol shall be classified as E-85.

(3) Ethanol blended gasoline, other than ethanol blended gasoline classified as E-85, shall be classified as E-xx where “xx” is the volume percent of ethanol in the ethanol blended gasoline.

b. (1) Biobutanol shall be classified as Bu-100.

(2) Biobutanol blended gasoline shall be classified as Bu-xx where “xx” is the volume percent of biobutanol in the biobutanol blended gasoline.

c. (1) Biodiesel shall be classified as B-100.

(2) Biodiesel blended fuel shall be classified as B-xx where “xx” is the volume percent of biodiesel.

d. (1) Renewable diesel shall be classified RD-100.

(2) Renewable diesel blended fuel shall be classified RD-xx where “xx” is the volume percent of renewable diesel.

6. Motor fuel shall not contain more than trace amounts of MTBE, as provided in [section 214A.18](#).

[C31, 35, §5093-d2; C39, **§5095.02**; C46, 50, 54, 58, 62, 66, 71, §323.2; C73, 75, 77, 79, 81, §214A.2; **82 Acts, ch 1131, §1, ch 1170, §1**]

84 Acts, ch 1083, §1; 85 Acts, ch 76, §2 – 5; 85 Acts, ch 195, §23; 89 Acts, ch 75, §2; 90 Acts, ch 1252, §14; 91 Acts, ch 87, §1; 2000 Acts, ch 1224, §28; 2003 Acts, ch 167, §1, 4; 2004 Acts,

ch 1086, §106; 2006 Acts, ch 1142, §6 – 8, 83; 2006 Acts, ch 1175, §8, 23; 2008 Acts, ch 1169, §17, 18, 30; 2009 Acts, ch 41, §263; 2009 Acts, ch 179, §118; 2010 Acts, ch 1031, §247; 2011 Acts, ch 113, §1; 2013 Acts, ch 15, §4 – 6; 2014 Acts, ch 1104, §9 – 11; 2015 Acts, ch 103, §21; 2022 Acts, ch 1067, §16, 17; 2022 Acts, ch 1152, §14; 2023 Acts, ch 154, §29, 30

Referred to in §8A.360, 8A.360A, 159A.12, 214A.1, 214A.2B, 214A.4, 214A.5, 214A.21, 214A.22, 214A.23, 214A.25, 216B.3, 260C.19A, 262.25A, 307.21, 323.1, 422.11O, 422.11P, 422.11Y, 423.4, 452A.2A, 452A.12, 455G.31, 904.312A