
Draft Jamaican Standard

Specification

for

93 Octane Gasoline



BUREAU OF STANDARDS JAMAICA

**Public Comments Period: 22 March 2026 to
20 May 2026**

DRAFT JAMAICAN STANDARD

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JS 376: 2026

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This standard was circulated in the draft form for comment under the reference DJS 376: 2026 Jamaican Standards establish requirements in relation to commodities, processes and practices, but do not purport to include all the necessary provisions of a contract.

The attention of those using this standard specification is called to the necessity of complying with any relevant legislation.

Amendments

No.	Date of Issue	Remarks	Entered by and date

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DRAFT JAMAICAN STANDARD

Foreword

The establishment of specifications for higher octane fuel blends, such as 93 Octane, is of critical importance to ensure the performance, safety, environmental sustainability, and economic viability of the national energy sector. As vehicle technology evolves, there is an increasing demand for fuels that meet the performance requirements of modern, high-compression engines. Higher octane fuels are specifically designed to resist engine knocking, allowing for more efficient combustion and improved engine performance.

Furthermore, a specification for 93 Octane can support energy diversification and innovation, especially as Jamaica moves toward more fuel-efficient and environmentally friendly technologies. Higher octane fuels can contribute to lower emissions when paired with advanced engine technologies, supporting national commitments to environmental sustainability and climate change mitigation.

The development of specifications for Octane 93 is a proactive step toward ensuring fuel quality, protecting consumer interests, supporting environmental goals, and fostering a modern, resilient energy sector.

This standard is voluntary.

Committee representation

Acknowledgement

Related Documents

This standard makes reference to the following:

- a) API Standard 650, Welded Tanks for Oil Storage
- b) ASTM D4806 Standard Specification for denatured, dry, anhydrous ethanol
- c) ASTM D4814 Standard Specification for Automotive Spark-Ignition Engine Fuel
- d) EN 228 Automotive fuels - Unleaded petrol - Requirements and test methods
- e) Worldwide Fuel Charter

Draft Jamaican Standard Specification for Octane 93

1 Scope

This Jamaican standard prescribes the requirements for Ethanol (10% v/v) Gasoline for octane index 93.

2 Definition

For the purpose of this standard the following definitions shall apply:

2.1

base gasoline

gasoline blend stock without ethanol. This is usually imported or manufactured by a refinery.

2.2

importer/supplier

entity that stores and delivers to multiple users (distributors or retailers) finished products obtained from their own qualified production operation, or from another source (to include another qualified in-house blending operation or by way of importation).

octane index value

indication of the average of the Research Octane Number and Motor Octane Number, stated as $(R+M)/2$ to customers. Octane Index (OI) value shall be indicated as the average of the Research Octane Number (RON) ASTM D2699 and Motor Octane Number (MON)ASTM D 2700.

2.4

oxygenates

generic term for oxygenated hydrocarbon products such as methanol, ethanol, isopropanol, tertiary butyl alcohol, tertiary methyl butyl ether, and tertiary amyl methyl ether.

3 General Requirements

3.1 Importer/supplier shall report the silver corrosion quality aspect for each batch of gasoline which is set at a maximum of 1.

3.2 Importer/supplier shall report the Drivability Index quality aspect for each batch of gasoline and maintain a database system. Data for a two-year period shall be maintained to facilitate applicable analysis.

3.3 Existent washed gum specification shall apply to gasoline-ethanol blends without additives.

3.4 Where Lead or MMT is not added by the producer of the gasoline, a statement of declaration shall be provided by the originating refinery/importer/blender.

3.5 Octane Index (OI) value shall be indicated as the average of the Research Octane Number

(RON) ASTM D2699 and Motor Octane Number (MON)ASTM D 2700. This shall be stated as (R+M)/2 to customers. All Octane Reading shall be to one decimal place.

3.6 Importer/supplier must analyze for olefins quality aspect for each batch of gasoline. The maximum Olefin content should be 18 volume percent.

3.7 The maximum allowed sulphur shall not exceed 150 ppm.

3.8 Distillation requirements shall meet ASTM D4814 standard test methods or equivalent accepted methods.

3.9 All unleaded gasoline sold or distributed shall contain sufficient detergent additive to meet the requirements of ASTM D5500 using the Lowest Additive Concentration (LAC). All gasoline additives shall be disclosed and shall be included in the most current list of approved additives.

3.10 Finished gasoline shall be visually free of dissolved water, sediment and/or suspended matter and shall be clear and bright at ambient temperature or 21 degrees centigrade whichever is higher.

4.0 Additional Requirements

4.1 The quality of denatured ethanol used to make finished gasoline products shall meet the requirements of ASTM D4806 with the exception that denatured ethanol shall have a 1.96 volume percent minimum and a 5 volume percent maximum gasoline

4.2 Product quality control testing shall be conducted from loading through the transportation and distribution chain to verify product integrity with respect to water and ethanol content.

4.3 There shall be a quality certificate for each unique finished batch of E10 gasoline based on the obtained hand-blend results of the base gasoline of 9.5% by volume un-denatured or 10% denatured ethanol.

5 Specifications

The following table provides the specifications for Unleaded E10 93 Octane Index.

Table 1: Unleaded E10 Motor Gasoline, 93 Octane Index
This specification describes the legal requirements for Unleaded E10 motor gasoline

Properties	ASTM Test Method	Units	Minimum	Maximum
Aromatics, Total	D1319, D5580, D6550	vol%		45.0
Benzene Level, blend-stock - hand blend	D3606, D5580, D6277	vol%		2.5
Corrosion, Copper Strip, 3 hours @ 50 deg. C	D130. Table A 1.1			1
Corrosion, Silver Strip, 3 hours @ 50 deg. C (1)	D4814			1
Density @ 15 deg. C	D4052	kg/m ³		Report
Gravity API 60 deg. F	D1298			Report
Drivability Index (2)	D4814	Deg. C		Report
Gum (existent) washed (3)	D381	mg/100cm ³		5
Gum (existent) Unwashed (3)	D381	mg/100cm ³		30
Lead (4)	D3237	g/l		0.013
Metal, Manganese (4)	D3831	mg/l		<1
Octane Index (R+M)/2 (5)	D2700, D2699		93.0	
Olefins (6)	D1319, D5580, D6550, D6293	vol%		18.0
Oxidation Stability	D525	minutes	240	
Oxygenate, Ethanol	D4815, D5599, D5845	Vol%	9	10
Total, Oxygen	D5845, D4815, D5599	mass%		4
Sulphur (7)	D5453, D4294, D2622, D7039	ppm		(100)
Distillation. 10% Evaporation. (8)	D86	Deg. C		70
Distillation. 50% Evaporation (8)	D86	Deg. C	66	118
Distillation. 90% Evaporation. (8)	D86	Deg. C		190
Distillation FBP (8)	D86	Deg. C		225
Distillation. Residue (8)	D86	Vol.%		2
RVP @ 37.8 deg. C	D5191	Pa. gauge		7.58 x 10 ⁴
Additives (9)				Report
Appearance (10)	D4176			Bright and clear, visually free from water sediment and suspended matter

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The Standards Council is the controlling body of the Bureau of Standards Jamaica and is responsible for the policy and general administration of the Bureau.

The Council is appointed by the Minister in the manner provided for in the Standards Act, 1969. Using its powers in the Standards Act, the Council appoints committees for specified purposes.

The Standards Act, 1969 sets out the duties of the Council and the steps to be followed for the formulation of a standard.

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The following is an outline of the procedure which must be followed in the preparation of documents:

1. The preparation of standards documents is undertaken upon the Standard Council's authorisation. This may arise out of representation from national organisations or existing Bureau of Standards' Committees of Bureau staff. If the project is approved it is referred to the appropriate sectional committee or if none exists a new committee is formed, or the project is allotted to the Bureau's staff.
2. If necessary, when the final draft of a standard is ready, the Council authorises an approach to the Minister in order to obtain the formal concurrence of any other Minister who may be responsible for any area which the standard may affect.
3. The draft document is made available to the general public for comments. All interested parties, by means of a notice in the Press, are invited to comment. In addition, copies are forwarded to those known, interested in the subject.
4. The Committee considers all the comments received and recommends a final document to the Standards Council
5. The Standards Council recommends the document to the Minister for publication.
6. The Minister approves the recommendation of the Standards Council.
7. The declaration of the standard is gazetted and copies placed on sale.
8. On the recommendation of the Standards Council the Minister may declare a standard compulsory.
9. Amendments to and revisions of standards normally require the same procedure as is applied to the preparation of the original standard.

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