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Ethanol Gasoline for Motor Vehicles

车用乙醇汽油

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Ethanol Gasoline for Motor Vehicles

WARNING---if appropriate precautions are not taken, the product covered by this document may be dangerous during production, storage, transportation and use. This document is not intended to provide advice on all safety issues related to this product. The user is responsible for adopting appropriate safety and health measures and ensuring compliance with relevant national laws and regulations.

1 Scope

This document specifies the product classification, requirements, sampling, labelling, packaging, transportation, storage and safety of ethanol gasoline for motor vehicles (E10) and describes the test methods.

This document applies to ethanol gasoline for motor vehicles (E10) composed of a certain amount of denatured fuel ethanol (in accordance with GB 18350) and performance-enhancing additives added to a blending component of ethanol gasoline without oxygenated chemicals.

2 Normative References

The contents of the following documents constitute indispensable clauses of this document through the normative references in the text. In terms of references with a specified date, only versions with a specified date are applicable to this document. In terms of references without a specified date, the latest version (including all the modifications) is applicable to this document.

GB 190 Packing Symbol of Dangerous Goods

GB/T 259 Petroleum Products - Determination of Water-soluble Acids and Alkalis

GB/T 503 Determination of the Gasoline Octane Number - Test Method for Motor Octane Number

GB/T 511 Petroleum, Petroleum Products and Additives - Method for Determination of Mechanical Admixtures

GB/T 1884 Crude Petroleum and Liquid Petroleum Products - Laboratory Determination of Density - Hydrometer Method

GB/T 1885 Petroleum Measurement Tables

GB/T 4016 Terminology Relating to Petroleum Products

GB/T 4756 Method for Manual Sampling of Petroleum Liquids

GB/T 5096 Test Method for Corrosiveness to Copper from Petroleum Products by Copper

Chromatography

SH/T 0712 Standard Test Method for Iron in Gasoline by Atomic Absorption Spectroscopy

SH/T 0720 Standard Test Method for Determination of Oxygenates in Gasoline by Gas Chromatography and Oxygen Selective Flame Ionization Detection

SH/T 0794 Standard Test Method for Vapor Pressure of Petroleum Products (mini method)

3 Terms and Definitions

The terms and definitions defined in GB/T 4016 and GB 18350, and the following are applicable to this document.

3.1 antiknock index

Half the sum of the research octane number (RON) and the motor octane number (MON).

[source: GB/T 4016-2019, 2.15.025]

3.2 denatured fuel ethanol

Fuel ethanol used to prepare ethanol gasoline for motor vehicles after adding a denaturant, and it is not edible. It can be mixed with gasoline in the specified proportions as a fuel for spark-ignition internal combustion engines.

[source: GB 18350-2013, 3.3]

3.3 ethanol gasoline for motor vehicles (E10)

A fuel for spark-ignition engines of motor vehicles made by adding 10% (volume fraction) of denatured fuel ethanol (in accordance with GB 18350) to a blending component of ethanol gasoline for motor vehicles without the addition of oxygenated chemicals.

4 Product Classification

Ethanol gasoline for motor vehicles (E10) is classified into four designations based on research octane number: 89#, 92#, 95# and 98#.

5 Requirements and Test Methods

5.1 The technical requirements and test methods for 89#, 92# and 95# ethanol gasoline for motor vehicles (E10) (VIB) shall comply with the provisions of Table 1. The technical requirements and test methods for 98# ethanol gasoline for motor vehicles (E10) (VIB) shall comply with the provisions of Table A.1 in Appendix A.

5.2 Denatured fuel ethanol used to blend ethanol gasoline for motor vehicles (E10) shall comply with the requirements of GB 18350.

5.3 Additives used in ethanol gasoline for motor vehicles (E10) shall have no recognized harmful effects and shall be used in the recommended dosage. Ethanol gasoline for motor vehicles (E10) shall not contain any additives or contaminants that may cause vehicles to malfunction. Ethanol gasoline for motor vehicles (E10) shall not be artificially added with methylal, aniline, or compounds containing halogens, phosphorus or silicon.

6 Sampling

Sampling shall be conducted in accordance with GB/T 4756. The sampling volume shall satisfy the requirements for inspection and sample retention. Sampling shall be protected from light.

7 Labelling, Packaging, Transportation, Storage and Other Requirements

7.1 The labelling, packaging, transportation, storage and delivery acceptance of ethanol gasoline for motor vehicles (E10) shall be conducted in accordance with NB/SH/T 0164, GB 30000.7 and GB 190. The transportation of ethanol gasoline for motor vehicles (E10) shall comply with the provisions of JT/T 617.7.

7.2 All dispensers used to sell ethanol gasoline for motor vehicles (E10) that meet the requirements of this document shall clearly indicate the product name, designation and grade (VIB) in a prominent location. For example: “92# ethanol gasoline for motor vehicles (E10) (VIB)” and “95# ethanol gasoline for motor vehicles (E10) (VIB)”.

7.3 Ethanol gasoline for motor vehicles (E10) that complies with this document shall be transported and stored using dedicated pipes, containers and pumps. The storage and transportation system shall be clean and free of free water.

7.4 The materials used for pipes, containers, pumps and seals used during the transportation and storage of ethanol gasoline for motor vehicles (E10) shall not affect product quality.

8 Safety

In accordance with GB 30000.7, ethanol gasoline for motor vehicles (E10) is a flammable liquid. Its hazard statements and precautionary statements shall comply with the flammable liquids section of GB 30000.7.

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