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CCS E31



**NATIONAL STANDARD OF THE  
PEOPLE'S REPUBLIC OF CHINA**

**GB 25199-2017**

Replacing GB 25199-2015

**B5 diesel fuels**

B5柴油

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### 1 Scope

GB 25199-2017 is the Chinese national standard on b5 diesel fuels, in the field of petroleum and related technologies. It carries no /T suffix, which in the Chinese system means compliance is mandatory: a product or a practice within its scope has to meet it to be lawfully made, sold or carried out in China. It was issued on 7 September 2017 by the General Administration of Quality Supervision, Inspection and Quarantine of the People's Republic of China; Standardization Administration of China, and has been in force since 7 September 2017. Classification: ICS 75.160.20, CCS E31. This page is published from the official record of the standard held by the Chinese standards administration: the identification, the dates, the classification and the issuing body are taken from there. The clause text, the tables and the numeric limits are in the document itself, which is delivered complete in English translation.

This standard specifies the terms and definitions, classifications and markings, requirements and test methods, inspection rules and markings, packaging, transportation, storage and safety of B5 diesel blended from BD100 biodiesel and petroleum diesel. This standard is applicable to B5 common diesel fuel and B5 motor vehicle diesel fuel used in compression-combustion engines with BD100 biodiesel as the blending component.

### 2 Normative references

The following documents are essential to the application of this document. For the dated documents, only the versions with the dates indicated are applicable to this document; for

the undated documents, only the latest version (including all the amendments) are applicable to this standard.

GB 190 Packing symbol of dangerous goods

GB 252 General diesel fuels

GB/T 261 Determination of flash point - Pensky-Martens closed cup method

GB/T 264 Petroleum products - Determination of acid number

GB/T 265 Petroleum products - Determination of kinematic viscosity and calculation of dynamic viscosity

GB/T 268 Petroleum products - Determination of carbon residue - Conradson method

GB/T 386 Standard test method for cetane number of diesel fuel oil

GB/T 508 Petroleum products - Determination of ash

GB/T 510 Petroleum products - Determination of solidification point

GB/T 511 Petroleum products and additives - Determination of mechanical impurities-Gravimetric method

GB/T 1884 Crude petroleum and liquid petroleum products - Laboratory determination of density - Hydrometer method

### 3 Terms and definitions

The following terms and definitions apply to this document.

3.1 BD100 biodiesel Fatty acid monoalkyl esters obtained by reacting animal fats and oils or waste oils with alcohols such as methanol or ethanol, which is most typically fatty acid methyl esters (FAME), represented by BD100.

3.2 Petrodiesel Hydrocarbon liquid fuels made from petroleum or supplemented with additives for compression ignition engines.

3.4 Free glycerin Residual glycerol in biodiesel.

3.5 Monoglyceride The glyceride which has only one long side chain alkyl on the glycerol backbone produced by partial reaction of oils or fatty acids.

3.6 Total glycerin The sum of free glycerin in the biodiesel and the glycerin part of unreacted or partially reacted animal and vegetable oil.

#### 4.1 Product classification

4.1.1 Category. The products to which this standard belongs are divided into two categories. B5 general diesel and B5 vehicle diesel. B5 general diesel is the blended fuel of

BD100 biodiesel with a volume fraction of 1% ~ 5% and the general diesel with a volume fraction of 95% ~ 99% which complies with GB 252 with the exception of lubricity, it is suitable for tractors, d

4.1.2 Grade. B5 diesel is divided into 3 grades in accordance with the condensation point.

4.2 Product marking This product is marked as. Product grade Product category Example.

## 5 Requirements and test methods

5.1 The additives used in B5 diesel shall have no known harmful effects, it shall be used in the recommended appropriate amount. B5 diesel shall not contain any additives or contaminants that can cause the engine to fail. In the B5 diesel, it shall not artificially add methanol.

5.2 Technical requirements and test methods for B5 general diesel are shown in Table 1.

5.3 Technical requirements and test methods for B5 vehicle diesel (V) are shown in Table 2.

5.5 BD100 biodiesel complies with the provisions of Appendix C.

### 6.1 Inspection classification

6.1.1 Exit-factory inspection Exit-factory batch inspection items. chroma, sulfur content, acid value, copper strip corrosion, water content, mechanical impurities, total contaminant content, kinematic viscosity, flash point (closed), condensation point, cold filter point, distillation range, density, lubricity, fatty acid methyl ester content.

6.1.2 Type Inspection Type inspection items are all inspection items specified in clause

5 Technical requirements.

6.3 Sampling Sampling is made in accordance with GB/T 4756, 4 L sample is taken for inspection and retention.

6.4 Judgment rules When the results of the exit-factory inspection meet all the technical requirements in Table 1, Table 2 or Table 3 of this standard, the batch of products is determined to be qualified.

6.5 Re-inspection rules If the exit-factory inspection results do not meet the technical requirements of Table 1, Table 2 or Table 3, double-quantity of samples shall be taken from the same batch of products in accordance with the provisions of GB/T 4756 to perform re-inspection for the unqualified items.

## 7 Markings, packaging, transport and storage

7.1 The dispensers used for B5 diesel oil which is sold to users that meet the requirements of Table 1, Table 2 and Table 3 of this standard shall clearly indicate the name, designation

and grade (V or VI) of the product, such as No.0 B5 general diesel, No. 0 B5 vehicle diesel (V), etc.

7.2 B5 diesel is a flammable liquid. The marking, packaging, transportation and storage of the product and delivery acceptance are carried out in accordance with SH/T 0164, GB 30000.7-2013 and GB 190.

## **8 Safety**

B5 diesel is a flammable liquid. Please refer to Appendix D of GB 30000.7-2013 for the hazard description and precautionary statements.

## **9 Standard implementation**

This standard shall be implemented as of the date of promulgation, and the transitional requirements is introduced gradually.