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Edition 2

## **SOUTH AFRICAN NATIONAL STANDARD**

# **Automotive biodiesel — Fatty Acid Methyl Esters (FAME) for diesel engines — Requirements and test methods**

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**Table of changes**

<b>Change No.</b>	<b>Date</b>	<b>Scope</b>

**Foreword**

This South African standard was prepared by National Committee SABS/TC 028/SC 03, *Petroleum products, biofuels and lubricants – Fuels*, in accordance with procedures of the SABS, in compliance with annex 3 of the WTO/TBT agreement.

This document was published in December 2011.

This document supersedes SANS 1935:2004 (edition 1).

**This document is referenced in the Regulations of the Petroleum Products Amendment Act, 2003 (Act No. 58 of 2003).**

Annexes B, C and D form an integral part of this document. Annexes A and E are for information only.

**Compliance with this document cannot confer immunity from legal obligations.**

<p><b>Reaffirmed and reprinted in April 2017. This document will be reviewed every five years and be reaffirmed, amended, revised or withdrawn.</b></p>
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## **Automotive biodiesel — Fatty Acid Methyl Esters (FAME) for diesel engines — Requirements and test methods**

### **1 Scope**

This standard specifies requirements and test methods for marketed and delivered biodiesel to be used either as automotive fuel for diesel engines at 100 % concentration, or as an extender for automotive fuel for diesel engines in accordance with the requirements of SANS 342. At 100 % concentration it is applicable to fuel for use in diesel engine vehicles designed or subsequently adapted to run on 100 % biodiesel.

NOTE SANS 342 deals with automotive fuel for diesel engines.

### **2 Normative references**

The following referenced documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies. Information on currently valid national and international standards can be obtained from the SABS.

ASTM D1160, *Standard test method for distillation of petroleum products at reduced pressure.*

ASTM D4057, *Standard practice for manual sampling of petroleum and petroleum products.*

ASTM D4177, *Standard practice for automatic sampling of petroleum and petroleum products.*

EN 14331, *Liquid petroleum products – Separation and characterisation of fatty acid methyl esters (FAME) from middle distillates – Liquid chromatography (LC)/ gas chromatography (GC) method.*

EN 14538, *Fat and oil derivatives – Fatty acid methyl ester (FAME) – Determination of Ca, K, Mg and Na content by optical emission spectral analysis with inductively coupled plasma (ICP OES).*

EN 15751, *Automotive fuels – Fatty acid methyl ester (FAME) fuel and blends with diesel fuel – Determination of oxidation stability by accelerated oxidation method.*

EN 15779, *Petroleum products and fat and oil derivatives – Fatty acid methyl esters (FAME) for diesel engines – Determination of polyunsaturated fatty acid methyl esters (PUFA) by gas chromatography.*

ISO 2160, *Petroleum products – Corrosiveness to copper – Copper strip test.*

ISO 2719, *Determination of flash point – Pensky-Martens closed cup method.*