
**Petroleum products — Aviation and
distillate fuels — Determination of electrical
conductivity**

*Produits pétroliers — Carburants aviation et distillats — Détermination
de la conductivité électrique*



Foreword

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International Standard ISO 6297 was prepared by Technical Committee ISO/TC 28, *Petroleum products and lubricants*.

This second edition cancels and replaces the first edition (ISO 6297:1983), which has been technically revised.

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Petroleum products — Aviation and distillate fuels — Determination of electrical conductivity

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1 Scope

This International Standard specifies a method for the determination of the electrical rest conductivity of aviation and distillate fuels with or without a static dissipator additive. The method measures conductivity when the fuel is uncharged, i.e. electrically at rest (known as rest conductivity).

Two methods are available for fuel conductivity measurement, either using a portable meter for the direct measurement in tanks or laboratory and field measurement of samples, or using an in-line meter for continuous measurement of fuel conductivities (equivalent to rest conductivity) in a flowing stream. When using either type of instrument care should be taken in allowing the relaxation of residual electrical charges before measurement and in preventing contamination.

The procedure can be used to measure conductivities from 1 pS/m to 2 000 pS/m using the equipment used to establish the reported precision. The range can be extended to greater than 2 000 pS/m with the correct selection of electrode size and current measuring apparatus.

2 Normative references

The following standards contain provisions which, through reference in this text, constitute provisions of this International Standard. At the time of publication, the editions indicated were valid. All standards are subject to revision, and parties to agreements based on this International Standard are encouraged to investigate the possibility of applying the most recent edition of the standards indicated below. Members of IEC and ISO maintain registers of currently valid International Standards.

ISO 3171:1988, *Petroleum liquids - Automatic pipeline sampling*.

ASTM D4057 : 1988, *Standard Practice for Manual Sampling of Petroleum and Petroleum Products*

3 Definitions

For the purposes of this International Standard the following definition applies.

3.1 rest conductivity: The reciprocal of the resistivity of uncharged fuel in the absence