



National Standards Authority of Ireland

IRISH STANDARD

I.S. EN 14832:2005

ICS 75.080

**PETROLEUM AND RELATED PRODUCTS -
DETERMINATION OF THE OXIDATION
STABILITY AND CORROSIVITY OF
FIRE-RESISTANT PHOSPHATE ESTER FLUIDS**

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English version

Petroleum and related products - Determination of the oxidation stability and corrosivity of fire-resistant phosphate ester fluids

Pétrole et produits connexes - Détermination de la stabilité à l'oxydation et de la corrosivité des fluides difficilement inflammables à base d'esters phosphates

Mineralölerzeugnisse und verwandte Produkte - Bestimmung der Oxidationsbeständigkeit und der Einwirkung auf Metallwerkstoffe von schwerentflammbaren Flüssigkeiten auf der Basis von Phosphorsäureestern

This European Standard was approved by CEN on 25 May 2005.

CEN members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a national standard without any alteration. Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the Central Secretariat or to any CEN member.

This European Standard exists in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CEN member into its own language and notified to the Central Secretariat has the same status as the official versions.

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Foreword

This European Standard (EN 14832:2005) has been prepared by Technical Committee CEN/TC 19 “Petroleum products, lubricants and related products”, the secretariat of which is held by NEN.

This European Standard shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by December 2005, and conflicting national standards shall be withdrawn at the latest by December 2005.

According to the CEN/CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Slovakia, Slovenia, Spain, Sweden, Switzerland and United Kingdom.

EN 14832:2005 (E)

1 Scope

This European Standard specifies a method for assessing the oxidation stability of phosphate ester hydraulic fluids. These products fall into category HFDR of EN ISO 6743-4 [2] and into categories TSD, TGD and TCD of ISO 6743-5 [3]. The amount of acid developed during the test and the mass changes of the metal specimens are used to assess the level of oxidation stability.

The precision of the test method applies to changes in acid number up to 3,0 mg KOH/g and changes in mass of up to 3 mg per test piece. The change of acidity is determined using one of the test methods ISO 6618, ISO 6619, or ISO 7537. Results from two different test methods are not necessarily compatible and direct comparison needs caution.

NOTE This test method may also be applied to other non-aqueous fire-resistant fluids, such as those falling into category HFDU of EN ISO 6743-4 [2].

WARNING — The use of this European Standard may involve hazardous materials, operations and equipment. This document does not purport to address all of the safety problems associated with its use. It is the responsibility of the user of this document to establish appropriate safety and health practices and determine the applicability of regulatory limitations prior to use.

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.

EN 10277-2, *Bright steel products — Technical delivery conditions — Part 2: Steels for general engineering purposes*

EN ISO 2160, *Petroleum products — Corrosiveness to copper — Copper strip test (ISO 2160:1998)*

EN ISO 3170, *Petroleum liquids — Manual sampling (ISO 3170:2004)*

EN ISO 3696, *Water for analytical laboratory use — Specification and test methods (ISO 3696:1987)*

ISO 6618, *Petroleum products and lubricants — Determination of acid or base number — Colour-indicator titration method*

ISO 6619, *Petroleum products and lubricants — Neutralization number — Potentiometric titration method*

ISO 7537, *Petroleum products — Determination of acid number — Semi-micro colour-indicator titration method*

3 Terms and definitions

For the purposes of this European Standard, the following terms and definitions apply.

3.1

oxidation stability

sum of the changes in acid number of the fire-resistant fluid and of water in the absorption vessel when subjected to the accelerated oxidizing conditions specified in this document

3.2

corrosivity

change in mass of specified metal test pieces subjected to the accelerated oxidizing conditions specified in this document

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