National Standards Authority of Ireland

STANDARD

I.S. EN 61221:2004

ICS 29.120.
75.120

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PETROLEUM PRODUCTS AND LUBRICANTS - TRIARYL PHOSPHATE ESTER TURBINE CONTROL FLUIDS (CATEGORY ISO-TCD) SPECIFICATIONS (IEC 61221:2004)

This Irish Standard was published under the authority of the National Standards Authority of Ireland and comes into effect on:

November 24, 2004

Price Code J

Údarás um Chaighdeáin Náisiúnta na hÉireann

EUROPEAN STANDARD **EN 61221**

NORME EUROPÉENNE

EUROPÄISCHE NORM October 2004

ICS 29.120; 75.120 Supersedes EN 61221:1995

English version

Petroleum products and lubricants – Triaryl phosphate ester turbine control fluids (category ISO-L-TCD) - Specifications

(IEC 61221:2004)

Produits pétroliers et lubrifiants – Fluides de régulation de turbines à base d'esters de triarylphosphate (catégorie ISO-L-TCD) – Spécifications (CEI 61221:2004)

Mineralölerzeugnisse und Schmiermittel - Triaryl-Phosphatester-Turbinen-Steuerflüssigkeiten (Kategorie ISO-L-TCD) – Anforderungen (IEC 61221:2004)

This European Standard was approved by CENELEC on 2004-09-01. CENELEC 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 CENELEC 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 CENELEC member into its own language and notified to the Central Secretariat has the same status as the official versions.

CENELEC members are the national electrotechnical committees of 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.

CENELEC

European Committee for Electrotechnical Standardization
Comité Européen de Normalisation Electrotechnique
Europäisches Komitee für Elektrotechnische Normung

Central Secretariat: rue de Stassart 35, B - 1050 Brussels

Ref. No. EN 61221:2004 E

Foreword

The text of document 10/583/FDIS, future edition 2 of IEC 61221, prepared by IEC TC 10, Fluids for electrotechnical applications, was submitted to the IEC-CENELEC parallel vote and was approved by CENELEC as EN 61221 on 2004-09-01.

This European Standard supersedes EN 61221:1995.

The main changes with respect to EN 61221:1995 include:

a) introduction of new tests to define fire resistance, namely the Manifold Ignition and Wick flame persistence tests;

b) flame persistence tests;

c) introduction of a pour point requirement;

d) a change to the Sequence II foaming requirement;

e) introduction of a cleanliness requirement;

f) introduction of an elastomer compatibility requirement;

g) use of ISO test methods equivalent to the original DIN tests.

The following dates were fixed:

– latest date by which the EN has to be implemented at national level by publication of an identical national standard or by endorsement	(dop)	2005-06-01
– latest date by which the national standards conflicting with the EN have to be withdrawn	(dow)	2007-09-01

Annex ZA has been added by CENELEC.

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Endorsement notice

The text of the International Standard IEC 61221:2004 was approved by CENELEC as a European Standard without any modification.

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Annex ZA
(normative)

Normative references to international publications with their corresponding European publications

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.

NOTE Where an international publication has been modified by common modifications, indicated by (mod), the relevant EN/HD applies.

Publication	Year	Title	EN/HD	Year
IEC 60247	- [1)]	Insulating liquids - Measurement of relative permittivity, dielectric dissipation factor (tan d) and d.c. resistivity	EN 60247	2004 [2)]
IEC 60978	- [1)]	Maintenance and use guide for triaryl phosphate ester turbine control fluids	-	-
ISO 760	- [1)]	Determination of water - Karl Fischer method (General method)	-	-
ISO 2592	- [1)]	Determination of flash and fire points - Cleveland open cup method	EN ISO 2592	2001 [2)]
ISO 3016	- [1)]	Petroleum Oils - Determination of pour point	-	-
ISO 3104	- [1)]	Petroleum products - Transparent and opaque liquids - Determination of kinematic viscosity and calculation of dynamic viscosity	EN ISO 3104	1996 [2)]
ISO 3170	- [1)]	Petroleum liquids - Manual sampling	EN ISO 3170	2004 [2)]
ISO 3448	- [1)]	Industrial liquid lubricants - ISO viscosity classification	-	-
ISO 3675	- [1)]	Crude petroleum and liquid petroleum products - Laboratory determination of density - Hydrometermethod	EN ISO 3675	1998 [2)]
ISO 4259	- [1)]	Petroleum products - Determination and application of precision data in relation to methods of test	EN ISO 4259	1995 [2)]

[1)] Undated reference.

[2)] Valid edition at date of issue.

Publication	Year	Title	EN/HD	Year
ISO 4406	- [1)]	Hydraulic fluid power - Fluids - Method for coding the level of contamination by solid particles	-	-
ISO 6072	- [1)]	Hydraulic fluid power - Compatibility between fluids and standard elastomeric materials	-	-
ISO 6247	- [1)]	Petroleum products - Determination of foaming characteristics of lubricating oils	-	-
ISO 6614	- [1)]	Petroleum products - Determination of water separability of petroleum oils and synthetic fluids	-	-
ISO 6619	- [1)]	Petroleum prodcuts and lubricants - Neutralization number - Potentiometric titration method	-	-
ISO 6743-5	- [1)]	Lubricants, industrial oils and related products (class L) - Classification Part 5: Family T (Turbines)	-	-
ISO 9120	- [1)]	Petroleum and related products - Determination of air-release properties of steam turbine and other oils - Impinger method	-	-
ISO 11500	- [1)]	Hydraulic fluid power - Determination of particulate contamination by automatic counting using the light extinction principle	-	-
ISO 12185	- [1)]	Crude petrolelum and petroleum products - Determination of density - Oscillating U-tube method	EN ISO 12185	1996 [2)]
		Petroleum and related products - Determination of the oxidation stability and corrosivity of phosphate ester fluids	EN 14832	- [3)]
		Petroleum and related products - Determination of hydrolytic stability of phosphate ester fluids	EN 14833	- [3)]

3) draft CEN standard.