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NSAI Standards

Irish Standard
I.S. EN 60974-7:2013

Arc welding equipment -- Part 7: Torches (IEC 60974-7:2013 (EQV))

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EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN 60974-7

May 2013

ICS 25.160

Supersedes EN 60974-7:2005

English version

Arc welding equipment - Part 7:Torches

(IEC 60974-7:2013)

Matériel de soudage à l'arc - Partie 7: Torches (CEI 60974-7:2013)

Lichtbogenschweißeinrichtungen - Teil 7: Brenner (IEC 60974-7:2013)

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CENELEC

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

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Ref. No. EN 60974-7:2013 E

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Foreword

The text of document 26/492/FDIS, future edition 3 of IEC 60974-7, prepared by IEC/TC 26 "Electric welding" was submitted to the IEC-CENELEC parallel vote and approved by CENELEC as EN 60974-7:2013.

The following dates are fixed:

• latest date by which the document has to be implemented at national level by publication of an identical national standard or by endorsement	(dop)	2013-11-28
• latest date by which the national standards conflicting with the document have to be withdrawn	(dow)	2016-02-28

This document supersedes EN 60974-7:2005.

EN 60974-7:2013 includes the following significant technical changes with respect to EN 60974-7:2005:

- new requirement for degree of protection of torch coupling device (see Table 1);
- scope is extended to cable-hose assembly connected between a power source and ancillary equipment (see Clause 1);
- torch parts, as recommended by the manufacturer, are included in the safe plasma cutting system design (see 7.4.2);
- new flammability requirement for handle material (see 11.3).

This standard shall be used in conjunction with EN 60974-1:2012.

In this standard, the following print types are used:

- *conformity statements: in italic type.*

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CENELEC [and/or CEN] shall not be held responsible for identifying any or all such patent rights.

This standard covers the Principle Elements of the Safety Objectives for Electrical Equipment Designed for Use within Certain Voltage Limits (LVD - 2006/95/EC).

Endorsement notice

The text of the International Standard IEC 60974-7:2013 was approved by CENELEC as a European Standard without any modification.

In the official version, for Bibliography, the following note has to be added for the standard indicated :

IEC 60974-2	NOTE	Harmonised as EN 60974-2.

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Annex ZA
(normative)

Normative references to international publications with their corresponding European publications

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

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

Publication	Year	Title	EN/HD	Year
IEC 60050	Series	International Electrotechnical Vocabulary	-	-
IEC 60529	-	Degrees of protection provided by enclosures (IP Code)	EN 60529	-
IEC 60664-1	-	Insulation coordination for equipment within low-voltage systems - Part 1: Principles, requirements and tests	EN 60664-1	-
IEC 60695-11-10	-	Fire hazard testing - Part 11-10: Test flames - 50 W horizontal and vertical flame test methods	EN 60695-11-10	-
IEC 60974-1	2012	Arc welding equipment - Part 1: Welding power sources	EN 60974-1	2012

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

ARC WELDING EQUIPMENT –

Part 7: Torches

FOREWORD

1) The International Electrotechnical Commission (IEC) is a worldwide organization for standardization comprising all national electrotechnical committees (IEC National Committees). The object of IEC is to promote international co-operation on all questions concerning standardization in the electrical and electronic fields. To this end and in addition to other activities, IEC publishes International Standards, Technical Specifications, Technical Reports, Publicly Available Specifications (PAS) and Guides (hereafter referred to as "IEC Publication(s)"). Their preparation is entrusted to technical committees; any IEC National Committee interested in the subject dealt with may participate in this preparatory work. International, governmental and non-governmental organizations liaising with the IEC also participate in this preparation. IEC collaborates closely with the International Organization for Standardization (ISO) in accordance with conditions determined by agreement between the two organizations.
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International Standard IEC 60974-7 has been prepared by IEC technical committee 26: Electric welding.

This third edition cancels and replaces the second edition published in 2005 and constitutes a technical revision. The significant changes with respect to the previous edition are listed below:

- new requirement for degree of protection of torch coupling device (see Table 1);
- scope is extended to cable-hose assembly connected between a power source and ancillary equipment (see Clause 1);
- torch parts, as recommended by the manufacturer, are included in the safe plasma cutting system design (see 7.4.2);
- new flammability requirement for handle material (see 11.3).

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The text of this standard is based on the following documents:

FDIS	Report on voting
26/492/FDIS	26/495/RVD

Full information on the voting for the approval of this standard can be found in the report on voting indicated in the above table.

This publication has been drafted in accordance with the ISO/IEC Directives, Part 2.

This part of IEC 60974 is to be used in conjunction with IEC 60974-1.

A list of all parts of the IEC 60974 series can be found, under the general title *Arc welding equipment*, on the IEC website.

In this standard, the following print types are used:

– *conformity statements: in italic type.*

The committee has decided that the contents of this publication will remain unchanged until the stability date indicated on the IEC web site under "http://webstore.iec.ch" in the data related to the specific publication. At this date, the publication will be

- reconfirmed,
- withdrawn,
- replaced by a revised edition, or
- amended.

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ARC WELDING EQUIPMENT –

Part 7: Torches

1 Scope

This part of IEC 60974 specifies safety and construction requirements for torches for arc welding and allied processes. This part of IEC 60974 is applicable to manual, mechanically guided, air-cooled, liquid-cooled, motorized, spool-on and fume extraction torches.

In this part of IEC 60974, a torch consists of the torch body, the cable-hose assembly and other components.

This part of IEC 60974 is also applicable to a cable-hose assembly connected between a power source and ancillary equipment.

This part of IEC 60974 is not applicable to electrode holders for manual metal arc welding or air-arc cutting/gouging.

NOTE 1 Typical allied processes are electric arc cutting and arc spraying.

NOTE 2 Other components are listed in Table A.1.

NOTE 3 In this part of IEC 60974, the terms "torch" and "gun" are interchangeable. For convenience "torch" has been used in the following text.

2 Normative references

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

IEC 60050 (all parts), *International Electrotechnical Vocabulary* (available at <http://www.electropedia.org>)

IEC 60529, *Degrees of protection provided by enclosures (IP Code)*

IEC 60664-1, *Insulation coordination for equipment within low-voltage systems – Part 1: Principles, requirements and tests*

IEC 60695-11-10, *Fire hazard testing – Part 11-10: Test flames – 50 W horizontal and vertical flame test methods*

IEC 60974-1:2012, *Arc welding equipment – Part 1: Welding power sources*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in IEC 60050, IEC 60664-1, and IEC 60974-1, as well as the following, apply.

NOTE Additional terminology is given in Annex A.

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