BS EN IEC 60974-7:2019

BSI Standards Publication

Arc welding equipment

Part 7: Torches

bsi.

National foreword

This British Standard is the UK implementation of EN IEC 60974-7:2019. It is identical to IEC 60974-7:2019. It supersedes BS EN 60974-7:2013, which is withdrawn.

The UK participation in its preparation was entrusted to Technical Committee WEE/6, Electric arc welding equipment.

A list of organizations represented on this committee can be obtained on request to its secretary.

This publication does not purport to include all the necessary provisions of a contract. Users are responsible for its correct application.

Published by BSI Standards Limited 2019

ISBN 978 0 580 98165 4

ICS 25.160.30

Compliance with a British Standard cannot confer immunity from legal obligations.

This British Standard was published under the authority of the Standards Policy and Strategy Committee on 30 November 2019.

Amendments/corrigenda issued since publication

Date	Text affected

EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN IEC 60974-7

November 2019

ICS 25.160.30

Supersedes EN 60974-7:2013 and all of its amendments and corrigenda (if any).

English Version

Arc welding equipment - Part 7: Torches (IEC 60974-7:2019)

Matériel de soudage à l'arc - Partie 7: Torches (IEC 60974-7:2019)

Lichtbogenschweißeinrichtungen - Teil 7: Brenner (IEC 60974-7:2019)

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

CEN-CENELEC Management Centre: Rue de la Science 23, B-1040 Brussels

European foreword

The text of document 26/673/FDIS, future edition 4 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 IEC 60974-7:2019.

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) 2020-05-08
- latest date by which the national standards conflicting with the document have to be withdrawn (dow) 2022-11-08

This document supersedes EN 60974-7:2013 and all of its amendments and corrigenda (if any).

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Endorsement notice

The text of the International Standard IEC 60974-7:2019 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	Harmonized as EN 60974-2

CONTENTS

INTERNATIONAL ELECTROTECHNICAL COMMISSION

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ARC WELDING EQUIPMENT –

Part 7: Torches

FOREWORD

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International Standard IEC 60974-7 has been prepared by IEC technical committee 26: Electric welding.

This fourth edition cancels and replaces the third edition published in 2013 and constitutes a technical revision.

This edition includes the following significant technical changes with respect to the previous edition:

a) definitions 3.11 and 3.20 were revised;
b) requirements for ARC STRIKING AND STABILIZING VOLTAGE rating have been added to the sequence of type tests (see 6.2);
c) the AC test voltage requirement for TORCHES that utilize ARC STRIKING AND STABILIZING VOLTAGES has been revised (see 7.5.2);

d) the test configuration of isolated circuits for TORCHES that utilize ARC STRIKING AND STABILIZING VOLTAGES has been revised (see 7.5.2);

e) the metal tube used for the heating tests has additional allowable means of cooling methods (see 8.3.2 and 8.3.5);

f) for FUME EXTRACTION TORCHES, the instructions for use include additional information (see Clause 13, item i)).

The text of this International Standard is based on the following documents:

FDIS	Report on voting
26/673/FDIS	26/678/RVD

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

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

In this standard, the following print types are used:

– conformity statements: *in italic type;*

– terms used throughout this standard which have been defined in clause 3: SMALL ROMAN CAPITALS.

This document is to be used in conjunction with IEC 60974-1:2017.

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

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

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

ARC WELDING EQUIPMENT –

Part 7: Torches

1 Scope

This part of IEC 60974 specifies safety and construction requirements for TORCHES used for arc welding and allied processes. This document is applicable to MANUAL, MECHANICALLY GUIDED, AIR-COOLED, LIQUID-COOLED, MOTORIZED, SPOOL-ON and FUME EXTRACTION TORCHES.

In this document, a TORCH consists of the TORCH BODY, the CABLE-HOSE ASSEMBLY and other components.

This document is also applicable to a CABLE-HOSE ASSEMBLY connected between a power source and ancillary equipment.

This document 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 document, all procedures and requirements are the same for "TORCHES" and "GUNS". For convenience, the term "TORCH" is used in the following text.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements 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.

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

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

IEC 60974-1:2017, *Arc welding equipment – Part 1: Welding power sources*

ISO 21904-3:2018, *Health and safety in welding and allied processes – Requirements, testing and marking of equipment for air filtration – Part 3: Determination of the capture efficiency of on-torch welding fume extraction devices*

3 Terms and definitions

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

ISO and IEC maintain terminological databases for use in standardization at the following addresses: