



NSAI
Standards

Irish Standard
I.S. EN 50540:2010

Conductors for overhead lines - Aluminium Conductors Steel Supported (ACSS)

I.S. EN 50540:2010

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EUROPEAN STANDARD
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EN 50540

April 2010

ICS 29.240.20

English version

**Conductors for overhead lines -
Aluminium Conductors Steel Supported (ACSS)**

Conducteurs pour lignes aériennes -
Conducteurs à faible dilatation (ACSS)

Leiter für Freileitungen -
Aluminiumleiter, von beschichtetem Stahl
getragen (Ausführung ACSS)

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CENELEC

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

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Foreword

This European Standard was prepared by CENELEC BTTF 132-1, Aluminium conductors steel supported (ACSS type) for overhead electrical lines, based on the text of BT/ES0023/NOT. It was submitted to the CENELEC Unique Acceptance Procedure and was approved by CENELEC as EN 50540 on 2010-04-01.

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

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) 2011-04-01

 - latest date by which the national standards conflicting
with the EN have to be withdrawn (dow) 2013-04-01
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1 Scope

This European Standard specifies the electrical and mechanical characteristics of ACSS conductors made of round or formed annealed aluminium wires and steel wires stranded in alternate directions, made of one or a combination of any of the following.

1.1 Outer/conductive layers

Annealed Aluminium wire as per requirements of Clause 5.

1.2 Steel core

- a) Galvanized steel wire type ST6A according to EN 50189 and requirements of Clause 5;
- b) Zn95Al5 alloy coated steel wire with MM (mischmetal) as per EN 10244-2 and mechanical and mass of coating requirements as per Tables 2 and 3, in the following options:
 - i Extra High Strength;
 - ii Ultra High Strength.

NOTE MM elements are mandatory. Coatings without MM can be used, if agreed between Supplier and Purchaser. Tests without MM must show the same behaviour than the MM coatings.

- c) Aluminium-clad steel wire 20,3 % conductivity in the following options:
 - as per EN 61232 with class designation 20 SA;
 - aluminium-clad steel wire Extra High Strength with designation 20 EHSA as per Table 4.
- d) Aluminium-clad steel wire 14 % conductivity, Extra High Strength with designation 14 EHSA as per Table 5.

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 10244-2	Steel wire and wire products. Non-ferrous metallic coating on steel wire Part 2: zinc or zinc alloy coatings
EN 50182	Conductors for overhead lines - Round wire concentric lay stranded conductors
EN 50189	Conductors for overhead lines - Zinc coated steel wires (for testing purposes only)
EN 60889	Hard-drawn aluminum wire for overhead line conductors (for testing purposes only) (IEC 60889)
EN 61232	Aluminium-clad steel wires for electrical purposes (IEC 61232)
EN 62219	Overhead electrical conductors - Formed wire, concentric lay, stranded conductors (IEC 62219)
IEC 60050-466	International Electrotechnical Vocabulary (IEV) - Chapter 466: Overhead lines
IEC 60468	Method of measurement of resistivity of metallic materials

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