



NSAI
Standards

Irish Standard
I.S. EN 50382-2:2008

Railway applications - Railway rolling stock high temperature power cables having special fire performance -- Part 2: Single core silicone rubber insulated cables for 120 °C or 150 °C

I.S. EN 50382-2:2008

Incorporating amendments/corrigenda issued since publication:

EN 50382-2:2008/A1:2013

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SWiFT xxx: A rapidly developed recommendatory document based on the consensus of the participants of an NSAI workshop.

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NSAI 1 Swift Square, Northwood, Santry Dublin 9	T +353 1 807 3800 F +353 1 807 3838 E standards@nsai.ie W NSAI.ie	Sales: T +353 1 857 6730 F +353 1 857 6729 W standards.ie
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English version

**Railway applications -
Railway rolling stock high temperature power cables having special fire
performance -
Part 2: Single core silicone rubber insulated cables for 120 °C or 150 °C**

Applications ferroviaires -
Câbles pour matériel roulant ferroviaire
ayant des performances particulières de
comportement au feu -
Partie 2: Câbles monoconducteurs isolés
au silicone pour 120 °C ou 150 °C

Bahnanwendungen -
Hochtemperaturkabel und -leitungen für
Schienenfahrzeuge mit verbessertem
Verhalten im Brandfall -
Teil 2: Einadrige silikonisolierte Leitungen
für 120 °C oder 150 °C

This amendment A1 modifies the European Standard EN 50382-2:2008; it was approved by CENELEC on 2013-04-29. CENELEC members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this amendment the status of a national standard without any alteration.

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CENELEC

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

Management Centre: Avenue Marnix 17, B - 1000 Brussels

Foreword

This document (EN 50382-2:2008/A1:2013) has been prepared by CLC/TC 20 "Electric cables".

The following dates are fixed:

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at national level by publication of an identical national
standard or by endorsement
- latest date by which the national standards conflicting with (dow) 2016-04-29
this document have to be withdrawn

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1 Scope

Add the following text after the 2nd paragraph:

The temperature limit for maximum operating of 120 °C for tinned conductors may be increased to 150 °C by agreement between the purchaser and the manufacturer.

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English version

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Teil 2: Einadrige silikonisolierte Leitungen
für 120 °C oder 150 °C

This European Standard was approved by CENELEC on 2008-02-01. 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.

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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

Foreword

This European Standard was prepared for the Technical Committee CENELEC TC 20, Electric cables, by Working Group 12, Railway Cables, as part of the overall programme of work in the Technical Committee CENELEC TC 9X, Electrical and electronic applications for railways.

The text of the draft was submitted to the formal vote and was approved by CENELEC as EN 50382-2 on 2008-02-01.

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with the EN have to be withdrawn (dow) 2011-02-01
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Contents

Introduction	4
1 Scope	5
2 Normative references	5
3 Definitions	6
4 Rated voltage	6
5 Marking and identification	6
5.1 Marking of cable	6
5.2 Colour identification	7
6 Construction of cables	7
6.1 General	7
6.2 Conductor	7
6.3 Conductor screening	7
6.4 Separator	7
6.5 Insulation system	8
6.6 Sheath	8
6.7 Textile braid	8
6.8 Constructional components	9
7 Tests	15
7.1 Definitions relating to tests	15
7.2 Conductor resistance	15
7.3 Voltage test	15
7.4 Insulation resistance	15
7.5 Dielectric strength	16
7.6 Spark test	16
7.7 D.C. stability	16
7.8 Surface resistance	16
7.9 Ageing test	17
7.10 Long term ageing test	17
7.11 Hot set test	17
7.12 Compatibility	17
7.13 Water absorption test	17
7.14 Ozone resistance	18
7.15 Mineral oil resistance	18
7.16 Acid & alkali resistance	18
7.17 Bending test at low temperature (cables with OD ≤ 12,5 mm)	19
7.18 Cold elongation test (cables with OD > 12,5 mm)	19
7.19 Impact test at low temperature	19
7.20 Dynamic cut through (for unsheathed cables)	19
7.21 Notch propagation (for unsheathed cables)	20
7.22 Reaction to fire – Cable	20
7.23 Reaction to fire – Components	20
Annex A (normative) Code designation	24
Bibliography	25
Tables	
Table 1 – General data – Cable type 1,8/3 kV unsheathed (120 °C or 150 °C)	10
Table 2 – General data – Cable type 1,8/3 kV sheathed (120 °C or 150 °C)	11
Table 3 – General data – Cable type 3,6/6 kV unsheathed (120 °C or 150 °C)	12
Table 4 – General data – Cable type 3,6/6 kV unsheathed with class 6 conductor (120 °C or 150 °C)	13
Table 5 – General data - Cable type 3,6/6 kV sheathed (120 °C or 150 °C)	14
Table 6 – Minimum load of dynamic cut through	20
Table 7 – Schedule of tests for cables	21

Introduction

EN 50382 covers cables operating at high temperature with standard wall thickness of insulation, both sheathed and unsheathed, based upon halogen free materials, for use in railway rolling stock. It is divided into 2 parts:

- Part 1: General requirements;
- Part 2: Single core silicone rubber insulated cables for 120 °C or 150 °C.

Special test methods referred to in EN 50382 are given in EN 50305. A Guide to Use is given in EN 50355.

Information regarding selection and installation of cables, including current ratings can be found in EN 50355 and EN 50343. The procedure for selection of conductor cross-sectional area, including reduction factors for ambient temperature and installation type, is described in EN 50343.

NOTE Current ratings for inclusion in EN 50355 are under development for the next amendment.

Part 1, General requirements, contains a more extensive introduction to EN 50382, and should be read in conjunction with this Part 2.

1 Scope

Part 2 of EN 50382 specifies requirements for, and constructions and dimensions of, single core cables of the following types and voltage ratings:

- 1,8/3 kV unscreened, unsheathed with or without textile braid (1,5 mm² to 400 mm²);
- 1,8/3 kV unscreened, sheathed (1,5 mm² to 400 mm²);
- 3,6/6 kV unscreened, unsheathed with or without textile braid (2,5 mm² to 400 mm²);
- 3,6/6 kV unscreened, sheathed (2,5 mm² to 400 mm²).

All cables have class 5 or class 6 tinned or plain copper conductors to EN 60228, halogen-free insulation and where applicable halogen-free sheath. They are for use in railway rolling stock as fixed wiring, or wiring where limited flexing in operation is encountered. The requirements provide for a continuous conductor temperature not exceeding 120 °C or 150 °C and a maximum temperature for short circuit conditions of either 250 °C or 350 °C based on a duration of 5 s. When the insulating compounds and sheath specified in this standard which are thermally capable of operating at 150 °C are used with tinned conductors, the maximum operating temperature is limited to 120 °C and, for the same technical reason, the maximum short circuit temperature is limited to 250 °C. The choice of sheath may also limit the maximum operating temperature to 120 °C.

A textile braid may be included in the insulation or applied at its surface to unsheathed cables.

Under fire conditions the cables exhibit special performance characteristics in respect of maximum permissible flame propagation (flame spread) and maximum permissible emission of smoke and toxic gases.

This Part 2 of EN 50382 should be used in conjunction with Part 1 "General requirements".

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 10002-1	Metallic materials – Tensile testing – Part 1: Method of test (at ambient temperature)
EN 50266-2-4	Common test methods for cables under fire conditions – Test for vertical flame spread of vertically-mounted bunched wires or cables – Part 2-4: Procedures – Category C
EN 50266-2-5	Common test methods for cables under fire conditions – Test for vertical flame spread of vertically-mounted bunched wires or cables – Part 2-5: Procedures – Small cables - Category D
EN 50305:2002	Railway applications – Railway rolling stock cables having special fire performance – Test methods
EN 50382-1	Railway applications – Railway rolling stock high temperature power cables having special fire performance – Part 1: General requirements
EN 50395:2005	Electrical test methods for low voltage energy cables
EN 60228	Conductors of insulated cables (IEC 60228)
EN 60332-1-2	Tests on electric and optical fibre cables under fire conditions – Part 1-2: Test for vertical flame propagation for a single insulated wire or cable – Procedure for 1 kW pre-mixed flame (IEC 60332-1-2)

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