

Conductors for overhead lines - Characteristics of greases

Conductors for overhead lines - Characteristics of greases

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

| | |
|--|--|
| Käesolev Eesti standard EVS-EN 50326:2003 sisaldab Euroopa standardi EN 50326:2002 ingliskeelset teksti. | This Estonian standard EVS-EN 50326:2003 consists of the English text of the European standard EN 50326:2002. |
| Käesolev dokument on jõustatud 08.05.2003 ja selle kohta on avaldatud teade Eesti standardiorganisatsiooni ametlikus väljaandes. | This document is endorsed on 08.05.2003 with the notification being published in the official publication of the Estonian national standardisation organisation. |
| Standard on kättesaadav Eesti standardiorganisatsioonist. | The standard is available from Estonian standardisation organisation. |

| | |
|---|---|
| Käsitlusala: This standard specifies the characteristics of protective products, commonly known as greases, for corrosion protection of bare overhead line conductors made of aluminium, aluminium alloy, steel wires or a combination of these wires | Scope: This standard specifies the characteristics of protective products, commonly known as greases, for corrosion protection of bare overhead line conductors made of aluminium, aluminium alloy, steel wires or a combination of these wires |
|---|---|

ICS 29.240.20, 75.100

Võtmesõnad: electric cables, electric conductors, electrical engineering, fats, grease, inspection, lubricants, overhead line conductors, overhead power lines, packages, packing, protecting agents, specification (approval), specifications, steel wires, steels, testing, wires

EUROPEAN STANDARD

EN 50326

NORME EUROPÉENNE

EUROPÄISCHE NORM

August 2002

ICS 29.240.20; 75.100

English version

Conductors for overhead lines - Characteristics of greases

Conducteurs pour lignes aériennes -
Caractéristiques des produits de
protection

Leiter für Freileitungen -
Eigenschaften von Fetten

This European Standard was approved by CENELEC on 2002-03-01. 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, Czech Republic, Denmark, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Luxembourg, Malta, Netherlands, Norway, Portugal, Slovakia, 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

Foreword

This European Standard was prepared by the Technical Committee CENELEC TC 7, Overhead electrical conductors.

The text of the draft was submitted to the formal vote and was approved by CENELEC as EN 50326 on 2002-03-01.

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) 2003-03-01
- latest date by which the national standards conflicting
with the EN have to be withdrawn (dow) 2005-03-01

Annexes designated "normative" are part of the body of the standard.

Annexes designated "informative" are given for information only.

In this standard, annexes A, B, C and D are normative and annex E is informative.

Contents

| | | |
|--|---|----|
| 1 | Scope | 4 |
| 2 | Normative references..... | 4 |
| 3 | Definitions | 4 |
| 4 | Designation system..... | 4 |
| 5 | Requirements for grease..... | 5 |
| 6 | Tests | 5 |
| 7 | Packaging and marking..... | 10 |
| 8 | Information to be clarified by the grease purchaser and the grease supplier | 11 |
| Annex A (normative) Acidity or alkalinity test method for type B grease..... | | 13 |
| Annex B (normative) Sample preparation and test procedure for ageing test..... | | 15 |
| Annex C (normative) Test method for stability under steady state conditions..... | | 18 |
| Annex D (normative) Test method for stability under short circuit conditions | | 19 |
| Annex E (informative) Greases in frequent use in some of the member countries..... | | 20 |
| Figure 1 – Grading index of degree of corrosion (see 6.12.2)..... | | 12 |
| Figure B.1 – Suggested method for coating steel plates with type A grease..... | | 15 |
| Figure B.2 – Steel plate for type B grease..... | | 16 |
| Table 1 – Type and sample tests for grease | | 6 |
| Table 2 – Type A grease penetrability test acceptance criteria | | 7 |
| Table 3 – Type B grease penetrability test acceptance criteria | | 8 |
| Table A.1 – Acidity or alkalinity index formula | | 14 |
| Table E.1 – Greases in common use in some member countries | | 20 |

1 Scope

This standard specifies the characteristics of protective products, commonly known as greases, for corrosion protection of bare overhead line conductors made of aluminium, aluminium alloy, steel wires or a combination of these wires.

2 Normative references

This European Standard incorporates by dated or undated reference, provisions from other publications. These normative references are cited at the appropriate places in the text and the publications are listed hereafter. For dated references, subsequent amendments to or revisions of any of these publications apply to this European standard only when incorporated in it by amendment or revision. For undated references the latest issue of the publication referred to applies.

| | | |
|---------------|------|---|
| EN 10152 | | <i>Electrolytically zinc coated cold rolled steel flat products – Technical delivery conditions</i> |
| EN 50182 | | <i>Conductors for overhead lines – Round wire concentric lay stranded conductors</i> |
| EN 60068-2-11 | | <i>Basic environmental procedures – Part 2 – Test Ka – Salt mist. (endorsing IEC 60068-2-11:1981)</i> |
| IEC 60050-466 | | <i>International Electrotechnical Vocabulary (IEV) – Chapter 466: Overhead Lines</i> |
| ISO 2176 | 1972 | <i>Petroleum – Lubricating grease – Determination of dropping point</i> |
| IP 121 | | <i>Determination of oil separation from lubricating grease – Pressure filtration method</i> |
| ISO 2137 | 1985 | <i>Petroleum products – Lubricating greases and petrolatums – Determination of cone penetration</i> |

3 Definitions

For the purpose of this standard, the definitions given in IEC 60050-466 and in EN 50182 apply.

4 Designation system

4.1 Greases shall be designated $\theta_1 A \theta_2$ or $\theta_1 B \theta_2$ where, A and B define the type of grease as follows:

- type A - grease applied without heating, for example greases consisting essentially of a stabilised mixture of mineral or synthetic oil and thickeners such as metal soaps or inorganic compounds;
- type B - grease applied with heating, for example greases consisting of petrolatum, waxes associated with small quantities of mineral oil and organic additives;
- θ_1 is the lowest temperature in °C below 0 °C at which tests referred to in this standard are required to be carried out;
- θ_2 is the highest temperature in °C at which tests referred to in this standard are required to be carried out.

If required by the user of the conductor the values of θ_1 and θ_2 shall be specified by the grease purchaser.