

Specification for pressure-sensitive adhesive tapes for electrical purposes Part 2: Methods of test

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

Käesolev Eesti standard EVS-EN 60454-2:2002 sisaldab Euroopa standardi EN 60454-2:1995 ingliskeelset teksti.

Standard on kinnitatud Eesti Standardikeskuse 18.12.2002 käskkirjaga ja jõustub sellekohase teate avaldamisel EVS Teatajas.

Standard on kättesaadav Eesti standardiorganisatsioonist.

This Estonian standard EVS-EN 60454-2:2002 consists of the English text of the European standard EN 60454-2:1995.

This standard is ratified with the order of Estonian Centre for Standardisation dated 18.12.2002 and is endorsed with the notification published in the official bulletin of the Estonian national standardisation organisation.

The standard is available from Estonian standardisation organisation.

ICS 29.040.20, 83.140

adhesive tapes, characteristics, solid electrical insulating material, test

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ICS 29.040.20;83.140

Descriptors: Solid electrical insulating material, adhesive tapes, test, characteristics

English version

Specification for pressure-sensitive adhesive tapes for
electrical purposes
Part 2 : Methods of test

(IEC 454-2 : 1994)

Spécification pour rubans adhésifs sensibles
à la pression à usages électriques
Partie 2: Méthodes d'essai
(CEI 454-2 : 1994)

Bestimmungen für selbstklebende
Isolierbänder für elektrotechnische
Anwendungen
Teil 2: Prüfverfahren
(IEC 454-2 : 1994)

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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

The text of document 15C(CO)345, future edition 2 of IEC 454-2, prepared by SC 15C, Specifications, of IEC TC 15, Insulating materials, was submitted to the IEC-CENELEC parallel vote and was approved by CENELEC as EN 60454-2 on 1994-12-06.

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) 1995-12-01
- latest date by which the national standards conflicting with the EN have to be withdrawn (dow) 1995-12-01

Annexes designated 'normative' are part of the body of the standard. In this standard, annexes A and ZA are normative. Annex ZA has been added by CENELEC.

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INTRODUCTION

This part of IEC 454 is one of a series which deals with the characteristics of pressure-sensitive adhesive tapes for electrical purposes.

The series consists of three parts:

Part 1: General requirements (IEC 454-1).

Part 2: Methods of test (IEC 454-2).

Part 3: Specifications for individual materials (IEC 454-3).

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SPECIFICATION FOR PRESSURE-SENSITIVE ADHESIVE TAPES FOR ELECTRICAL PURPOSES

Part 2: Methods of test

1 Scope

This part of IEC 454 specifies methods of test for pressure-sensitive adhesive tapes for electrical purposes.

2 Normative references

The following normative documents contain provisions, which, through reference in this text, constitute provisions of this part of IEC 454. At the time of publication, the editions indicated were valid. All normative documents are subject to revision, and parties to agreements based on this part of IEC 454 are encouraged to investigate the possibility of applying the most recent editions of the normative documents indicated below. Members of IEC and ISO maintain registers of currently valid International Standards.

IEC 216-1: 1990, *Guide for the determination of thermal endurance properties of electrical insulating materials – Part 1: General guidelines for ageing procedures and evaluation of test results*

IEC 216-2: 1990, *Guide for the determination of thermal endurance properties of electrical insulating materials – Part 2: Choice of test criteria*

IEC 216-3-1: 1990, *Guide for the determination of thermal endurance properties of electrical insulating materials – Part 3: Instructions for calculating thermal endurance characteristics – Section 1: Calculation using mean values of normally distributed complete data*

IEC 243-1: 1988, *Methods of test for electric strength of solid insulating materials – Part 1: Tests at power frequencies*

IEC 426: 1973, *Test methods for determining electrolytic corrosion with insulating materials*

IEC 454-3: *Specifications for pressure-sensitive adhesive tapes for electrical purposes – Part 3: Specifications for individual materials*

IEC 589: 1977, *Methods of test for the determination of ionic impurities in electrical insulating materials by extraction with liquids*

ISO 383: 1976, *Laboratory glassware – Interchangeable conical ground joints*

ISO 468: 1982, *Surface roughness – Parameters, their values and general rules for specifying requirements*

ISO 683-13: 1986, *Heat-treatable steels, alloy steels and free-cutting steels – Part 13: Wrought stainless steels*

ISO 1184: 1983, *Plastics – Determination of tensile properties of films*

ISO 2194: 1991, *Industrial screens – Woven wire cloth, perforated plate and electroformed sheet – Designation and nominal sizes of openings*

ISO 3071: 1980, *Textiles – Determination of pH of the aqueous extract*

ISO 3599: 1976, *Vernier callipers reading to 0,1 and 0,05 mm*

ISO/DIS 10093: *Plastics – Fire tests – Standard ignition sources* (under consideration)

3 Conditioning and specimen preparation

Unless otherwise specified, rolls are to be conditioned for at least 24 h at $(23 \pm 2) ^\circ\text{C}$ and $(50 \pm 5) \%$ relative humidity and all test procedures are to be carried out in this atmosphere.

Remove and discard the three outer turns before taking any test specimens from the conditioned roll. Specimen preparation shall be done with care in a clean environment. Specific specimen preparation details will be included with the appropriate test method.

Further conditioning of test specimens may be required.

4 Determination of thickness

4.1 Test apparatus

A dead-weight thickness gauge having two ground and concentric circular surfaces, flat within 0,001 mm and parallel to within 0,003 mm. The upper surface shall be 6 mm to 8 mm in diameter and the lower surface larger than the upper one. The upper surface shall move on the axis perpendicular to the two faces.

The gauge shall be graduated to read directly to 0,002 mm. The frame of the thickness gauge shall be of such rigidity that a load of 15 N applied to the gauge housing, out of contact with either the weight or the pressure foot spindle, will produce a deflection of the frame not greater than 0,002 mm (as indicated on the thickness gauge). The pressure exerted on the specimen shall be $(50 \pm 5) \text{ kPa}$.

The accuracy of the thickness gauge shall be checked frequently by means of a set of steel gauges; the measuring errors of the thickness gauge shall not exceed 0,005 mm.

4.2 Test specimens

Five specimens, at least 75 mm long, are cut from the roll at intervals not less than 300 mm. The specimen shall be allowed to relax for at least 5 min.