

SLOVENSKI STANDARD

SIST EN 60249-2-2:1997/A4:1997

01-avgust-1997

**Base materials for printed circuits - Part 2: Specifications - Specification No.2:
Phenolic cellulose paper copper-clad laminated sheet, economic quality -
Amendment A4 (IEC 249-2-2:1985/A4:1994)**

Base materials for printed circuits -- Part 2: Specifications -- Specification No. 2: Phenolic cellulose paper copper-clad laminated sheet, economic quality

Basismaterialien für gedruckte Schaltungen -- Teil 2: Einzelbestimmungen -- Einzelbestimmung Nr. 2: Kupferkaschierte Phenolharz-Hartpapiertafeln, wirtschaftliche Qualität

Matériaux de base pour circuits imprimés -- Partie 2: Specifications -- Spécification n° 2: Feuille de papier cellulose phénolique recouverte de cuivre de qualité économique

Ta slovenski standard je istoveten z: EN 60249-2-2:1994/A4:1995

ICS:

31.180 Tiskana vezja (TIV) in tiskane Printed circuits and boards
plošče

SIST EN 60249-2-2:1997/A4:1997 en

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EUROPEAN STANDARD
NORME EUROPÉENNE
EUROPÄISCHE NORM

EN 60249-2-2/A4

October 1995

UDC 621.3.049.75-036
ICS 31.180

Descriptors: Printed board, base material, specification, phenolic paper

English version

**Base materials for printed circuits
Part 2: Specifications
Specification No. 2: Phenolic cellulose paper
copper-clad laminated sheet, economic quality
(IEC 249-2-2:1985/A4:1994)**

Matériaux de base pour circuits
imprimés
Partie 2: Spécifications
Spécification n° 2: Feuille de papier
cellulose phénolique recouverte de
cuivre de qualité économique
(CEI 249-2-2:1985/A4:1994)

Basismaterialien für gedruckte
Schaltungen
Teil 2: Einzelbestimmungen
Einzelbestimmung Nr. 2:
Kupferkaschierte
Phenolharz-Hartpapiertafeln,
wirtschaftliche Qualität
(IEC 249-2-2:1985/A4:1994)

This amendment A4 modifies the European Standard EN 60249-2-2:1994; it was approved by CENELEC on 1995-09-20. 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.

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 amendment 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, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, 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

The text of amendment 4:1994 to the International Standard IEC 249-2-2:1985, prepared by IEC TC 52, Printed circuits, was submitted to the formal vote and was approved by CENELEC as amendment A4 to EN 60249-2-2:1994 on 1995-09-20 without any modification.

The following dates were fixed:

- latest date by which the amendment has to be implemented at national level by publication of an identical national standard or by endorsement (dop) 1996-09-01
- latest date by which the national standards conflicting with the amendment have to be withdrawn (dow) 1996-09-01

Endorsement notice

The text of amendment 4:1994 to the International Standard IEC 249-2-2:1985 was approved by CENELEC as an amendment to the European Standard without any modification.

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[SIST EN 60249-2-2:1997/A4:1997](https://standards.iteh.ai/catalog/standards/sist/57cc8d89-fba0-4b1a-874e-f6f75ba2268a/sist-en-60249-2-2-1997-a4-1997)

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**NORME
INTERNATIONALE
INTERNATIONAL
STANDARD**

**CEI
IEC**

249-2-2,
1985

249-2-4, -5, -9, -10
1987

249-2-14
1988

**AMENDEMENT 4
AMENDMENT 4**

1994-05

Amendement 4

Matériaux de base pour circuits imprimés

Deuxième partie:

Specifications. Specifications n^{os} 2, 4, 5, 9, 10 et 14
(standards.iteh.ai)

Amendment 4

SIST EN 60249-2-2:1997/A4:1997

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Base materials for printed circuits

Part 2:

**Specifications. Specifications Nos. 2, 4, 5, 9,
10 and 14**

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Commission Electrotechnique Internationale
International Electrotechnical Commission
Международная Электротехническая Комиссия

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FOREWORD

This amendment has been prepared by IEC technical committee 52: Printed circuits.

The text of this amendment is based on the following documents:

DIS	Report on voting
52(CO)396	52(CO)397

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

This amendment is applicable to the standards listed in the table below (first column). The relevant amendment number to each standard which this amendment modifies is also given in the table (second column).

IEC standard No.	Amendment No.
249-2-1	3
249-2-2	4
249-2-3	3
249-2-4	4
249-2-5	4
249-2-6	3
249-2-7	3
249-2-9	4
249-2-10	4
249-2-11	3
249-2-12	3
249-2-14	4
249-2-16	2
249-2-17	2
249-2-18	2
249-2-19	2

In publications IEC 249-2-2, IEC 249-2-4, IEC 249-2-5, IEC 249-2-9, IEC 249-2-10 and IEC 249-2-14, replace the existing subclause 5.8 "Size tolerances" and subclause 5.9 "Rectangularity of cut panels" by the following:

5.8 Sheet sizes

5.8.1 Typical sheet sizes

Typical sheet sizes are:

- 1 060 mm × 1 150 mm
- 915 mm × 1 220 mm
- 1 000 mm × 1 000 mm
- 1 000 mm × 1 200 mm.

Apart from these typical sheet sizes, fractions of the sizes and other sizes, for example larger, are available on the market.

5.8.2 Tolerances for sheet sizes

The size of the sheets delivered by the supplier shall not deviate more than $+20_0$ mm from the ordered size.

5.9 Cut panels

5.9.1 Cut panel sizes

Cut panel sizes shall be, when delivered, in accordance with the purchaser's specification.

5.9.2 Size tolerances for cut panels

For panels cut to size according to the purchaser's specification, the following tolerances for length and width shall apply:

Panel size (mm)	Tolerance $\pm$ (mm)	
	Normal	Close
Up to 300		0,5
Over 300 to 600	2	0,8
Over 600		1,6
NOTE – The specified tolerances include all deviations caused by cutting the panels.		

5.9.3 Rectangularity of cut panels

Property	Test method (subclause of IEC 249-1)	Requirements	
		Coarse (mm/m)	Normal (mm/m)
Rectangularity of cut panels	3.15	3	2