

# INTERNATIONAL STANDARD

Coaxial communication cables –  
Part 1-313: Mechanical test methods – Adhesion of dielectric and sheath  
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IEC Central Office  
3, rue de Varembe  
CH-1211 Geneva 20  
Switzerland  
Email: [inmail@iec.ch](mailto:inmail@iec.ch)  
Web: [www.iec.ch](http://www.iec.ch)

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Email: [csc@iec.ch](mailto:csc@iec.ch)  
Tel.: +41 22 919 02 11  
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## CONTENTS

FOREWORD.....	3
1 Scope.....	5
2 Normative references .....	5
3 Terms and definitions .....	5
4 Test method .....	5
4.1 Preparation of test specimens .....	5
4.2 Procedure .....	5
4.3 Expression of results .....	5
5 Requirements .....	6
6 Details to be specified .....	6
7 Test report.....	6
Figure 1 – Dimension of stripping.....	7
Figure 2 – Centre conductor adhesion test and sheath adhesion test.....	8

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## INTERNATIONAL ELECTROTECHNICAL COMMISSION

## COAXIAL COMMUNICATION CABLES –

Part 1-313: Mechanical test methods –  
Adhesion of dielectric and sheath

## FOREWORD

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International Standard IEC 61196-1-300 has been prepared by subcommittee 46A: Coaxial cables, of IEC technical committee 46: Cables, wires, waveguides, R.F. connectors, R.F. and microwave passive components and accessories.

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

FDIS	Report on voting
46A/923/FDIS	46A/930/RVD

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

This publication has been drafted in accordance with the ISO/IEC Directives, Part 2.

A list of all parts of IEC 61196 series, published under the general title *Coaxial communication cables*, can be found on the IEC website.

The committee has decided that the contents of this publication will remain unchanged until the maintenance result date indicated on the IEC web site under "<http://webstore.iec.ch>" in the data related to the specific publication. At this date, the publication will be

- reconfirmed,
- withdrawn,
- replaced by a revised edition, or
- amended.

A bilingual version of this publication may be issued at a later date.

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## COAXIAL COMMUNICATION CABLES –

### Part 1-313: Mechanical test methods – Adhesion of dielectric and sheath

#### 1 Scope

This part of IEC 61196-1 applies to coaxial communication cables. It specifies the test method to determine the adhesion of the dielectric to inner conductor and of the sheath to outer conductor of coaxial cables.

#### 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.

IEC 61196-1, *Coaxial communication cables – Part 1: Generic specification – General, definitions and requirements*

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#### 3 Terms and definitions (standards.iteh.ai)

For the purposes of this document, the definitions given in IEC 61196-1 apply.

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#### 4 Test method

##### 4.1 Preparation of test specimens

At least two test specimens separated by at least 300 mm shall be cut from the finished cable, unless otherwise specified in the relevant cable specification. Each test specimen shall be prepared as shown in Figure 1. Stripping shall be done carefully so as not to effect the adhesion of the test sample.

The tensile force shall be applied to the smaller of the two diameters under test and that component shall be of sufficient length to be gripped by the jaws of the tensile tester.

##### 4.2 Procedure

The test piece shall be loaded into the tensile testing machine and test fixture as shown in Figure 2. The diameter of the hole in the test plate shall be larger than the smaller of the two diameters under test by  $0,10 \pm 0,03$  mm.

The tensile force shall be applied steadily at a rate not exceeding 100 mm/min until, depending on which component is under test, the dielectric, outer conductor or sheath is completely removed. Sudden pulls and jerking shall be avoided. The physical handling of the test specimens shall be kept to a minimum to avoid specimen deterioration.

##### 4.3 Expression of results

The adhesion shall be defined as the highest tensile reading obtained. The reported adhesion value is the overall median of these results.

## 5 Requirements

The lengths and the values of adhesion shall be in accordance with the values stated in the relevant cable specification.

The conductor surface may exhibit minimal residue from the remaining insulating material.

## 6 Details to be specified

The sectional or detail specification shall define:

- the temperature;
- the value of the adhesion;
- the lengths.

## 7 Test report

The test report shall include:

- temperature;
- the lengths;
- the value of the adhesion;
- number of samples tested;
- pass/fail criteria.

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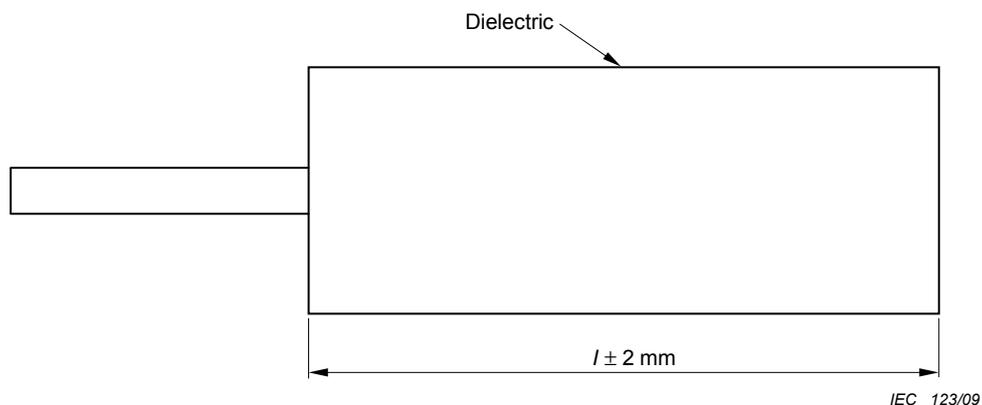


Figure 1a – Dimensions for adhesion test of inner conductor to dielectric

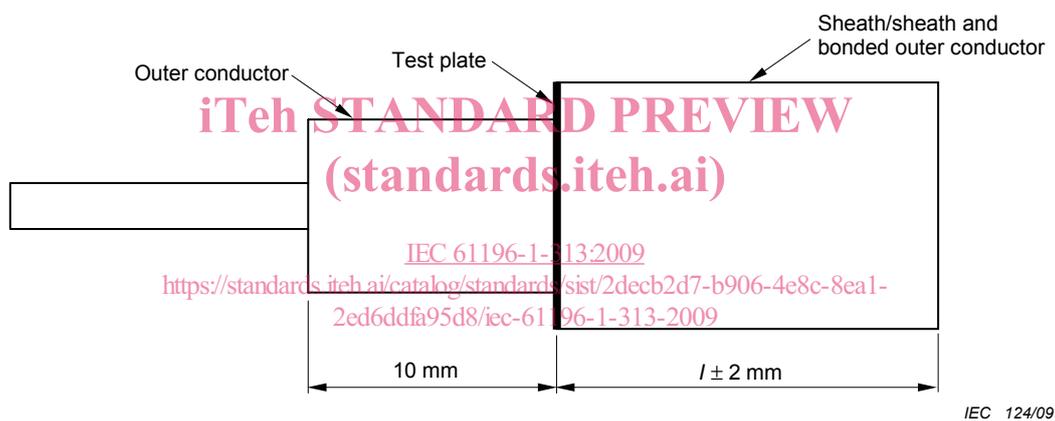


Figure 1b – Dimensions for adhesion test of sheath to outer conductor

Figure 1 – Dimension of stripping