

Guantes de protección contra los productos químicos y los microorganismos peligrosos. Parte 5: Terminología y requisitos de prestaciones para riesgos por microorganismos. (ISO 374-5:2016) (Ratificada por la Asociación Española de Normalización en junio de 2017.)

UNE-EN ISO 374-5:2016

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*Protective gloves against dangerous chemicals and micro-organisms - Part 5: Terminology and performance requirements for micro-organisms risks (ISO 374-5:2016) (Endorsed by Asociación Española de Normalización in June of 2017.)*

*Gants de protection contre les produits chimiques dangereux et les micro-organismes - Partie 5: Terminologie et exigences de performance pour des risques par des micro-organisme (ISO 374-5:2016) (Entérinée par l'Asociación Española de Normalización en juin 2017.)*

En cumplimiento del punto 11.2.5.4 de las Reglas Internas de CEN/CENELEC Parte 2, se ha otorgado el rango de documento normativo español UNE al documento normativo europeo EN ISO 374-5:2016 (Fecha de disponibilidad 2016-11-23)

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## Asociación Española de Normalización

Génova, 6  
28004 MADRID-España  
Tel.: 915 294 900  
[info@une.org](mailto:info@une.org)  
[www.une.org](http://www.une.org)

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EUROPEAN STANDARD  
NORME EUROPÉENNE  
EUROPÄISCHE NORM

**EN ISO 374-5**

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English Version

**Protective gloves against dangerous chemicals and micro-organisms - Part 5: Terminology and performance requirements for micro-organisms risks (ISO 374-5:2016)**

Gants de protection contre les micro-organismes -  
Partie 5: Terminologie et exigences de performance  
pour des risques par des micro-organisme (ISO 374-  
5:2016)

Schutzhandschuhe gegen Chemikalien und  
Mikroorganismen - Teil 5: Terminologie und  
Leistungsanforderungen für Risiken durch  
Mikroorganismen (ISO 374-5:2016)

This European Standard was approved by CEN on 24 September 2016.

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**CEN-CENELEC Management Centre: Avenue Marnix 17, B-1000 Brussels**

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<b>Contents</b>	<b>Page</b>
<b>European foreword .....</b>	<b>3</b>
<b>Annex ZA (informative) Relationship between this European Standard and the Essential Requirements of EU Directive 89/686/EEC.....</b>	<b>4</b>

## European foreword

This document (EN ISO 374-5:2016) has been prepared by Technical Committee CEN/TC 162 "Protective clothing including hand and arm protection and lifejackets", the secretariat of which is held by DIN, in collaboration with Technical Committee ISO/TC 94 "Personal safety - Protective clothing and equipment".

This European Standard shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by May 2017, and conflicting national standards shall be withdrawn at the latest by May 2017.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN [and/or CENELEC] shall not be held responsible for identifying any or all such patent rights.

This document has been prepared under a mandate given to CEN by the European Commission and the European Free Trade Association, and supports essential requirements of EU Directive(s).

For relationship with EU Directive(s), see informative Annex ZA, which is an integral part of this document.

According to the CEN-CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, Former Yugoslav Republic of Macedonia, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

## Endorsement notice

The text of ISO 374-5:2016 has been approved by CEN as EN ISO 374-5:2016 without any modification.

**Annex ZA**  
(informative)  
**Relationship between this European Standard and the Essential Requirements of EU Directive 89/686/EEC**

This European Standard has been prepared under a mandate given to CEN by the European Commission and the European Free Trade Association to provide a means of conforming to Essential Requirements of the New Approach Directive 89/686/EEC on the approximation of the laws of the Member States relating to personal protective equipment.

Once this standard is cited in the Official Journal of the European Union under that Directive and has been implemented as a national standard in at least one Member State, compliance with the clauses of this standard given in Table ZA confers, within the limits of the scope of this standard, a presumption of conformity with the corresponding Essential Requirements of that Directive and associated EFTA regulations

**Table ZA — Correspondence between this European Standard and Directive (Add the reference and title of the Directive)**

Essential Requirements (ERs) of Directive 89/686/EEC		Clause(s)/ subclause(s) of this EN	Qualifying remarks/ Notes
1.4	Information supplied by the manufacturer	Clause 7	
2.12.	PPE bearing one or more identification or recognition marks directly or indirectly relating to health and safety	Clause 6	
3.10 3.10.2	Protection against dangerous substances and infective agents Protection against cutaneous and ocular contact	5.2, 5.3 5.4	

**WARNING** — Other requirements and other EU Directives may be applicable to the product(s) falling within the scope of this standard.

# Contents

Page

<b>Foreword</b> .....	<b>iv</b>
<b>1 Scope</b> .....	<b>1</b>
<b>2 Normative references</b> .....	<b>1</b>
<b>3 Terms and definitions</b> .....	<b>1</b>
<b>4 Sampling</b> .....	<b>2</b>
4.1 Sampling for viral penetration testing.....	2
4.2 Sampling for bacteria/fungi penetration testing .....	2
<b>5 Performance requirement</b> .....	<b>3</b>
5.1 General requirements.....	3
5.2 Penetration.....	3
5.3 Protection against viruses.....	3
5.4 Requirements for different protection types of gloves .....	3
<b>6 Marking</b> .....	<b>3</b>
6.1 General.....	3
6.2 Marking of gloves protecting against bacteria and fungi .....	3
6.3 Marking of gloves protecting against viruses, bacteria and fungi.....	4
<b>7 Information supplied by the manufacturer</b> .....	<b>4</b>

## Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular the different approval criteria needed for the different types of ISO documents should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see [www.iso.org/directives](http://www.iso.org/directives)).

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights. Details of any patent rights identified during the development of the document will be in the Introduction and/or on the ISO list of patent declarations received (see [www.iso.org/patents](http://www.iso.org/patents)).

Any trade name used in this document is information given for the convenience of users and does not constitute an endorsement.

For an explanation on the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the World Trade Organization (WTO) principles in the Technical Barriers to Trade (TBT) see the following URL: [www.iso.org/iso/foreword.html](http://www.iso.org/iso/foreword.html).

ISO 374-5 was prepared by the European Committee for Standardization (CEN) in collaboration with ISO Technical Committee ISO/TC 94, *Personal safety — Protective clothing and equipment*, Subcommittee SC 13 *Protective clothing* in accordance with the Agreement on technical cooperation between ISO and CEN (Vienna Agreement).

ISO 374 consists of the following parts, under the general title *Protective gloves against dangerous chemicals and micro-organisms*:

- *Part 1: Terminology and performance requirements for chemical risks*
- *Part 5: Terminology and performance requirements for micro-organism risks*



# Protective gloves against dangerous chemicals and micro-organisms —

## Part 5: Terminology and performance requirements for micro-organisms risks

### 1 Scope

This part of ISO 374 specifies the requirements and test methods for protective gloves intended to protect the user against micro-organisms.

**NOTE** If other protection features is to be needed, e.g. chemical risks, mechanical risks, thermal risks, electrostatic dissipation etc., the appropriate specific performance standard is to be used in addition. Further information on protective gloves standards can be found in the EN 420.

### 2 Normative references

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

EN 374-2:2014, *Protective gloves against dangerous chemicals and micro-organisms — Part 2: Determination of resistance to penetration*

EN 420:2009, *Protective gloves — General requirements and test methods*

ISO 16604:2004, *Clothing for protection against contact with blood and body fluids — Determination of resistance of protective clothing materials to penetration by blood-borne pathogens — Test method using Phi-X 174 bacteriophage*

### 3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

#### 3.1

##### **protective gloves against micro-organisms**

protective gloves which form a protective barrier to microbiological agents

Note 1 to entry: Microbiological agents are bacteria or virus or fungi.

#### 3.2

##### **bacteria**

very large group of micro-organisms comprising one of the three domains of living organisms, they are prokaryotic, unicellular, and either free-living in soil or water or parasites of plants or animals

#### 3.3

##### **virus**

any of various simple sub-microscopic parasites of plants, animals, and bacteria that often cause disease and that consist essentially of a core of RNA or DNA surrounded by a protein coat

Note 1 to entry: Unable to replicate without a host cell, viruses are typically not considered living organisms.

### 3.4 fungi

any of numerous eukaryotic organisms of the kingdom Fungi, which lack chlorophyll and vascular tissue and range in form from a single cell to a body mass of branched filamentous hyphae that often produce specialized fruiting bodies

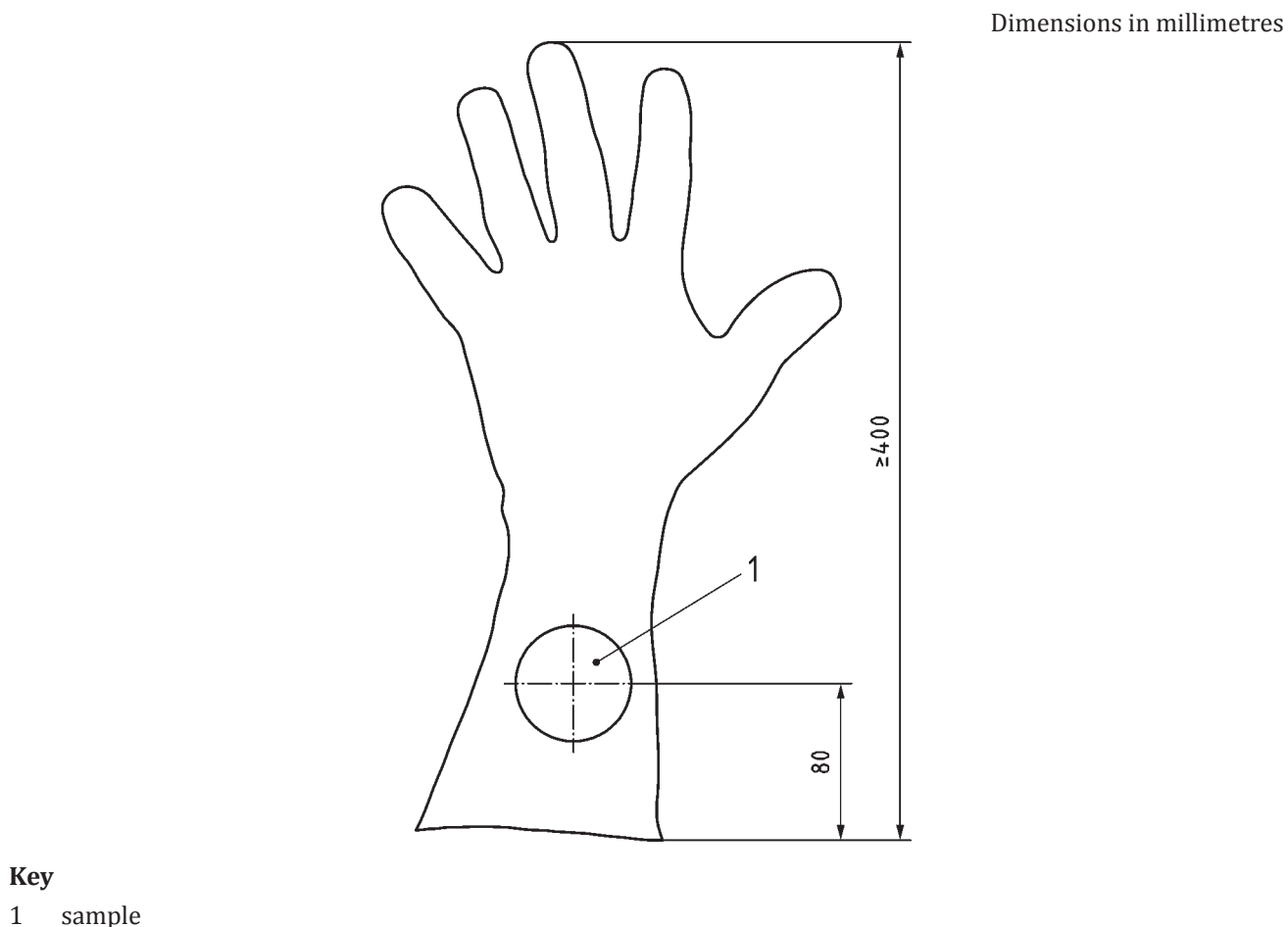
Note 1 to entry: The kingdom includes the yeasts, moulds and smuts.

## 4 Sampling

### 4.1 Sampling for viral penetration testing

The test specimen shall be taken from the palm area. If the glove is longer than or equal to 400 mm and if the cuff is claimed to protect against micro-organism risks, additional test specimens shall be taken where the centre is 80 mm from the end of the cuff (see [Figure 1](#)). For further instructions, see ISO 16604:2004, Clause 7.

In the case of seams in the hand area, this area shall be tested.



**Figure 1 — Additional sample location for gloves longer than 400 mm**

### 4.2 Sampling for bacteria/fungi penetration testing

The sampling for bacteria/fungi penetration shall be according to EN 374-2:2014, Clause 5.

## 5 Performance requirement

### 5.1 General requirements

Protective gloves against micro-organism risks shall comply with the requirements given in EN 420:2009, Clause 4, Clause 5 and Clause 7.

### 5.2 Penetration

Protective gloves against virus, bacteria and fungi shall not leak when tested according to EN 374-2:2014, 7.2 and 7.3.

### 5.3 Protection against viruses

Protective gloves against virus shall be tested according to ISO 16604 Procedure B and shall exhibit no detectable transfer (<1 PFU/ml) of the Phi-X174 bacteriophage in the assay titre.

### 5.4 Requirements for different protection types of gloves

The requirements are mentioned in the [Table 1](#).

**Table 1 — Requirements for different protection types of gloves**

	<a href="#">5.1</a>	<a href="#">5.2</a>	<a href="#">5.3</a>
Glove protecting against bacteria and fungi	X	X	
Glove protecting against virus, bacteria and fungi	X	X	X
X = required			

## 6 Marking

### 6.1 General

Marking of protective gloves against micro-organisms shall be in accordance with the marking requirement for protective gloves in EN 420.

### 6.2 Marking of gloves protecting against bacteria and fungi

For gloves protecting against bacteria and fungi complying with the requirements stated in [5.4](#), the pictogram in [Figure 2](#) shall be used with reference to this part of ISO 374.

ISO 374-5:2016



**Figure 2 — Marking of Glove protecting against bacteria and fungi**

### 6.3 Marking of gloves protecting against viruses, bacteria and fungi

For gloves protecting against viruses, bacteria and fungi complying with the requirements stated in [5.4](#), the pictogram in [Figure 3](#) shall be used with reference to ISO 374.

ISO 374-5:2016



**Figure 3 — Marking of gloves protecting against viruses, bacteria and fungi**

## 7 Information supplied by the manufacturer

The information supplied by the manufacturer shall be in accordance with the requirements for information as defined in EN 420. For protective gloves that are marked offering protection against micro-organisms and complying with the requirements in [5.4](#), this shall be stated in the user instructions.

The following warning shall be added that this information does not reflect the actual performance in the workplace: "The penetration resistance has been assessed under laboratory conditions and relates only to the tested specimen."

If not tested against viruses, the following warning shall be added: "Not tested against viruses".

