

**Kaitseriietus. Kaitsmine vedelate  
kemikaalide eest. Katsemeetod: materjalide  
vastupidavus vedelike läbiimbumisele**

Protective clothing - Protection against liquid  
chemicals - Test method for resistance of materials  
to penetration by liquids

## EESTI STANDARDI EESSÕNA

## NATIONAL FOREWORD

<p>Käesolev Eesti standard EVS-EN ISO 6530:2005 sisaldab Euroopa standardi EN ISO 6530:2005 ingliskeelset teksti.</p> <p>Käesolev dokument on jõustatud 30.03.2005 ja selle kohta on avaldatud teade Eesti standardiorganisatsiooni ametlikus väljaandes.</p> <p>Standard on kättesaadav Eesti standardiorganisatsioonist.</p>	<p>This Estonian standard EVS-EN ISO 6530:2005 consists of the English text of the European standard EN ISO 6530:2005.</p> <p>This document is endorsed on 30.03.2005 with the notification being published in the official publication of the Estonian national standardisation organisation.</p> <p>The standard is available from Estonian standardisation organisation.</p>
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<p><b>Käsitlusala:</b></p> <p>This International Standard specifies a test method for the measurement of indices of penetration, absorption and repellency for protective clothing materials against liquid chemicals, mainly chemicals of low volatility.</p>	<p><b>Scope:</b></p> <p>This International Standard specifies a test method for the measurement of indices of penetration, absorption and repellency for protective clothing materials against liquid chemicals, mainly chemicals of low volatility.</p>
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ICS 13.340.10

Võtmesõnad:

English version

Protective clothing – Protection against liquid chemicals

Test method for resistance of materials to penetration by liquids  
(ISO 6530:2005)

Vêtements de protection – Protection  
contre les produits chimiques liqui-  
des – Méthode d'essai pour la résis-  
tance des matériaux à la pénétration  
par des liquides (ISO 6530:2005)

Schutzkleidung – Schutz gegen flüs-  
sige Chemikalien – Prüfverfahren zur  
Bestimmung des Widerstands von  
Materialien gegen die Durchdringung  
von Flüssigkeiten (ISO 6530:2005)

This European Standard was approved by CEN on 2004-12-24.

CEN 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 Management Centre or to any CEN member.

The European Standards exist in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CEN member into its own language and notified to the Management Centre has the same status as the official versions.

CEN members are the national standards bodies of Austria, Belgium, Cyprus, the Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, the Netherlands, Norway, Poland, Portugal, Slovakia, Slovenia, Spain, Sweden, Switzerland, and the United Kingdom.

**CEN**

European Committee for Standardization  
Comité Européen de Normalisation  
Europäisches Komitee für Normung

**Management Centre: 36, rue de Stassart, B-1050 Brussels**

## Foreword

International Standard

ISO 6530:2005 Protective clothing – Protection against liquid chemicals – Test method for resistance of materials to penetration by liquids,

which was prepared by ISO/TC 94 'Personal safety – Protective clothing and equipment' of the International Organization for Standardization, has been adopted by Technical Committee CEN/TC 162 'Protective clothing including hand and arm protection and lifejackets', the Secretariat of which is held by DIN, as a European Standard.

This European Standard has been prepared under a mandate given to CEN by the European Commission and the European Free Trade Association, and supports essential requirements of the relevant EU Directive. For relationship with this directive, see Annex ZA.

This European Standard shall be given the status of a national standard, either by publication of an identical text or by endorsement, and conflicting national standards withdrawn, by August 2005 at the latest.

In accordance with the CEN/CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard:

Austria, Belgium, Cyprus, the Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, the Netherlands, Norway, Poland, Portugal, Slovakia, Slovenia, Spain, Sweden, Switzerland, and the United Kingdom.

## Endorsement notice

The text of the International Standard ISO 6530:2005 was approved by CEN as a European Standard without any modification.

## Introduction

This International Standard specifies a test method for measuring indices of penetration, absorption and repellency for protective clothing materials against low-volume, low-pressure splashes of liquid chemicals, usually chemicals of low volatility. ISO 13994 may be used for determining the penetration resistance of protective clothing materials against chemicals in larger volume and higher pressure splashes.

Clothing made of these materials should not be used as the sole means of protection where resistance to permeation by chemicals at the molecular level (see ISO 6529) is essential and where a complete barrier to liquid (or gaseous) chemicals is required (e.g. risk of exposure to massive and forceful discharges of concentrated liquid chemicals).

Data obtained by this test method may be used as a guide for screening protective clothing materials. Clothing, which has been developed from materials selected by this method of test should be used, therefore, only in well-defined circumstances when an evaluation of the finished item has indicated an acceptable level of performance (in laboratory and field-testing of a garment, consideration of exposure levels to specified chemicals, etc.).

In interpreting the results of the test method, the influences of the physical properties of the test chemical (e.g. volatility) should also be taken into consideration.

## 1 Scope

This International Standard specifies a test method for the measurement of indices of penetration, absorption and repellency for protective clothing materials against liquid chemicals, mainly chemicals of low volatility.

Two levels of the potential performance of materials are assessed by this method of testing to meet with possible requirements for protection against

- a) deposition on the surface of a material, at minimal pressure, of spray droplets up to coalescence or occasional small drips;
- b) contamination by a single low-volume splash or low-pressure jet, allowing sufficient time to divest the clothing or take other action as necessary to eliminate any hazard to the wearer from chemical retained by the protective garment, or, in circumstances where pressure is applied to liquid contaminants on the surface of the clothing material, as a result of natural movements of the wearer (flexing of contaminated areas of clothing at arms, knees, shoulders) and contact with contaminated surfaces (e.g. walking through sprayed foliage).

## 2 Definitions

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

### 2.1

#### **penetration**

process by which a chemical moves through pores, apertures or essential openings in a material or finished item of clothing

NOTE The apertures can be the result of mechanical damage.

### 2.2

#### **permeation**

process by which a chemical moves through a protective clothing material on a molecular level

NOTE Permeation involves the following:

- a) sorption of the molecules of the chemical onto the contact surface (outer surface) of the material;
- b) diffusion of the sorbed molecules into the material;
- c) desorption of the molecules from the opposite (inner) surface of the material.

### 2.3

#### **repellency**

ability of a material to shed liquid that is applied to its surface