

**Paints and varnishes - Coating materials and coating systems for exterior wood - Part 4:  
Assessment of the water-vapour permeability**

## EESTI STANDARDI EESSÕNA

## NATIONAL FOREWORD

Käesolev Eesti standard EVS-EN 927-4:2000 sisaldab Euroopa standardi EN 927-4:2000 ingliskeelset teksti.

Standard on kinnitatud Eesti Standardikeskuse 18.12.2000 käskkirjaga ja jõustub sellekohase teate avaldamisel EVS Teatajas.

Standard on kättesaadav Eesti standardiorganisatsioonist.

This Estonian standard EVS-EN 927-4:2000 consists of the English text of the European standard EN 927-4:2000.

This standard is ratified with the order of Estonian Centre for Standardisation dated 18.12.2000 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 87.040

### Standardite reprodutseerimis- ja levitamiseõigus kuulub Eesti Standardikeskusele

Andmete paljundamine, taastekitamine, kopeerimine, salvestamine elektroonilisse süsteemi või edastamine ükskõik millises vormis või millisel teel on keelatud ilma Eesti Standardikeskuse poolt antud kirjaliku loata.

Kui Teil on küsimusi standardite autorikaitse kohta, palun võtke ühendust Eesti Standardikeskusega:  
Aru 10 Tallinn 10317 Eesti; [www.evs.ee](http://www.evs.ee); Telefon: 605 5050; E-post: [info@evs.ee](mailto:info@evs.ee)

### Right to reproduce and distribute Estonian Standards belongs to the Estonian Centre for Standardisation

No part of this publication may be reproduced or utilized in any form or by any means, electronic or mechanical, including photocopying, without permission in writing from Estonian Centre for Standardisation.

If you have any questions about standards copyright, please contact Estonian Centre for Standardisation:  
Aru str 10 Tallinn 10317 Estonia; [www.evs.ee](http://www.evs.ee); Phone: +372 605 5050; E-mail: [info@evs.ee](mailto:info@evs.ee)

ICS 87.040

English version

Paints and varnishes - Coating materials and coating systems  
for exterior wood - Part 4: Assessment of the water-vapour  
permeability

Peintures et vernis - Produits de peinture et systèmes de  
peinture pour bois en extérieur - Partie 4: Détermination de  
la perméabilité à la vapeur d'eau

Lacke und Anstrichstoffe - Beschichtungsstoffe und  
Beschichtungssysteme für Holz im Außenbereich - Teil 4:  
Beurteilung der Wasserdampfdurchlässigkeit

This European Standard was approved by CEN on 7 July 2000.

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 Central Secretariat or to any CEN member.

This European Standard exists 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 Central Secretariat has the same status as the official versions.

CEN members are the national standards bodies of Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and United Kingdom.



EUROPEAN COMMITTEE FOR STANDARDIZATION  
COMITÉ EUROPÉEN DE NORMALISATION  
EUROPÄISCHES KOMITEE FÜR NORMUNG

Central Secretariat: rue de Stassart, 36 B-1050 Brussels

## Contents

	Page
Foreword .....	3
Introduction .....	3
1 Scope .....	3
2 Normative references .....	3
3 Terms and definitions .....	3
4 Test panels .....	4
5 Apparatus .....	5
6 Procedure .....	6
7 Calculation and expression of results .....	6
8 Test report .....	7
Annex A (informative) – Interpretation of test results and further calculations .....	8

This document is a preview generated by EVS

## Foreword

This European Standard has been prepared by Technical Committee CEN/TC 139 "Paints and varnishes", the secretariat of which is held by DIN.

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 January 2001, and conflicting national standards shall be withdrawn at the latest by January 2001.

EN 927 consists of the following parts under the general title "*Paints and varnishes – Coating systems for exterior wood*":

- Part 1: *Classification and selection*
- Part 2: *Performance specification*
- Part 3: *Natural weathering test*
- Part 4: *Assessment of the water-vapour permeability*
- Part 5: *Assessment of liquid water permeability*

Annex A is for information only.

According to the CEN/CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and the United Kingdom.

## Introduction

The treatment of exterior wood surfaces has both aesthetic and protective functions. A vital purpose of a coating system is to protect the wood against aesthetic deterioration (e.g. blue stain attack) and dimensional changes. Because such attacks are mainly caused by high moisture contents in the wood, a knowledge of the relative water vapour permeability properties of coating materials applied to exterior wood is helpful in selecting products for particular end-use applications, as described in EN 927-1.

This part of EN 927 provides a method for determining the water-vapour permeability of coating materials applied to exterior wood.

## 1 Scope

This part of EN 927 specifies a test method for assessing the water-vapour permeability of coating systems for exterior wood by measuring the absorption and desorption of water vapour by coated wood panels.

Results are expressed as the mass, in grams, of water gained and lost during two 14 day periods under specified conditions.

## 2 Normative references

This European Standard incorporates, by dated or undated reference, provisions from other publications. These normative references are cited at the appropriate places in the text and the publications are listed hereafter. For dated references, subsequent amendments to or revisions of any of these publications apply to this European Standard only when incorporated in it by amendment or revision. For undated references the latest edition of the publication referred to applies (including amendments).

EN 927-1	1996	Paints and varnishes – Coating materials and coating systems for exterior wood – Part 1: Classification and selection
EN ISO 2808	1999	Paints and varnishes – Determination of film thickness (ISO 2808:1997)
ISO 554	1976	Standard atmospheres for conditioning and/or testing – Specifications

## 3 Terms and definitions

For the purposes of this part of EN 927, the following terms and definitions apply:

### 3.1 water absorption

The ability of a coated surface area to absorb water from liquid or vapour [EN 927-1 : 1996]