

This document is a review generated by EVS

Plastics - Barrier films for agricultural and horticultural soil disinfection by fumigation - Part 1: Specifications for barrier films

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

See Eesti standard EVS-EN 17098-1:2018 sisaldb Euroopa standardi EN 17098-1:2018 ingliskeelset teksti.	This Estonian standard EVS-EN 17098-1:2018 consists of the English text of the European standard EN 17098-1:2018.
Standard on jõustunud sellekohase teate avaldamisega EVS Teatajas	This standard has been endorsed with a notification published in the official bulletin of the Estonian Centre for Standardisation.
Euroopa standardimisorganisatsioonid on teinud Euroopa standardi rahvuslikele liikmetele kättesaadavaks 10.01.2018.	Date of Availability of the European standard is 10.01.2018.
Standard on kättesaadav Eesti Standardikeskusest.	The standard is available from the Estonian Centre for Standardisation.

Tagasisidet standardi sisu kohta on võimalik edastada, kasutades EVS-i veebilehel asuvat tagasiside vormi või saates e-kirja meiliaadressile standardiosakond@evs.ee.

ICS 83.140.10

Standardite reproduutseerimise ja levitamise õigus kuulub Eesti Standardikeskusele

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

Kui Teil on küsimusi standardite autorikaitse kohta, võtke palun ühendust Eesti Standardikeskusega:
Koduleht www.evs.ee; telefon 605 5050; e-post info@evs.ee

The right to reproduce and distribute 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 a written permission from the Estonian Centre for Standardisation.

If you have any questions about copyright, please contact Estonian Centre for Standardisation:

Homepage www.evs.ee; phone +372 605 5050; e-mail info@evs.ee

EUROPEAN STANDARD
NORME EUROPÉENNE
EUROPÄISCHE NORM

EN 17098-1

January 2018

ICS 83.140.10

English Version

Plastics - Barrier films for agricultural and horticultural soil disinfection by fumigation - Part 1: Specifications for barrier films

Plastiques - Films barrière pour la désinfection par fumigation des sols agricoles et horticoles - Partie 1:
Spécifications des films barrière

Kunststoffe - Sperrsichtfolien für die Desinfektion durch Begasung von Landwirtschafts- und Gartenbauböden - Teil 1: Spezifikationen für Sperrsichtfolien

This European Standard was approved by CEN on 20 November 2017.

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 CEN-CENELEC Management Centre 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 CEN-CENELEC Management Centre has the same status as the official versions.

CEN members are the national standards bodies of 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, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and United Kingdom.



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

CEN-CENELEC Management Centre: Rue de la Science 23, B-1040 Brussels

Contents

	Page
European foreword	4
Introduction	5
1 Scope	6
2 Normative references	6
3 Terms and definitions, and abbreviated terms	6
3.1 Terms and definitions	6
3.2 Abbreviated terms	8
4 Classification of films by service life	8
5 Permeability to fumigants	8
5.1 General	8
5.2 Determination of the film permeability	9
6 Requirements	9
6.1 General requirements	9
6.2 Requirement for appearance	11
6.3 Optional characteristics	11
7 Test methods	11
7.1 Determination of the thickness	11
7.2 Determination of the width	11
7.3 Determination of the roll length	11
7.4 Determining tensile properties	12
7.5 Determination of the weathering resistance (for class 2 films only)	12
7.6 Determination of the peel strength	13
7.7 Determining impact resistance	16
7.8 Determining relative light transmission	17
8 Roll acceptance, storage and handling	18
8.1 Delivery checking	18
8.2 Storage and handling of rolls	18
9 Installation instructions and conditions for use	19
10 Disposal instructions and end of life of films	19
11 Designation of barrier films	19
12 Marking	20
12.1 Marking of the film	20
12.2 Marking on the packaging or label	20
Annex A (informative) Exposure to other light sources	22
A.1 Medium pressure mercury vapour lamps	22
A.1.1 Exposure method	22
A.1.2 Irradiance	22
A.1.3 Temperature	22

A.1.4 Apparatus calibration	23
A.1.5 Procedure	23
A.1.6 Calculation and expression of results	23
A.2 Fluorescent UV lamps.....	24
A.2.1 Exposure method.....	24
A.2.2 Procedure	24
A.2.3 Calculation and expression of results	24
Annex B (informative) Determination of the puncture resistance.....	25
B.1 Principle	25
B.2 Apparatus	25
B.3 Specimen preparation	26
B.4 Procedure	26
B.5 Expression of results	27
B.6 Test report	27
Annex C (informative) Guidance for conditions for installation, use and removal of barrier films	28
Bibliography	29

European foreword

This document (EN 17098-1:2018) has been prepared by Technical Committee CEN/TC 249 "Plastics", the secretariat of which is held by NBN.

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 July 2018, and conflicting national standards shall be withdrawn at the latest by July 2018.

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

EN 17098, *Plastics — Barrier films for agricultural and horticultural soil disinfection by fumigation*, consists of the following parts:

- *Part 1: Specifications for barrier films*
- *Part 2: Method for determining film permeability using a static technique*

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, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

Introduction

Use of barrier films designed for agricultural and horticultural soil disinfection by means of fumigation has the main objectives of protecting operators and personnel during and after the fumigation operation, limiting the consumption of harmful substances and safeguarding the environment.

1 Scope

This document specifies the requirements relating to the dimensional, mechanical and physical-chemical characteristics of thermoplastic barrier films designed for agricultural and horticultural soil disinfection by means of fumigation.

This document specifies also the test methods for verifying these requirements, except the method for determining film permeability using a static technique, which is specified in EN 17098-2.

This document defines also guidance for installation, use and disposal of barrier films.

This document is applicable to films used during soil disinfection by fumigation (class 1), and to films used during soil disinfection subsequently kept *in situ* as mulch films (class 2).

On the date of publication of this document, the barrier films are multi-layer films.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements 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.

EN 16472, *Plastics - Method for artificial accelerated photoageing using medium pressure mercury vapour lamps*

EN 17098-2, *Plastics — Barrier films for agricultural and horticultural soil disinfection by fumigation — Part 2: Method for determining film permeability using a static technique*

EN ISO 291, *Plastics - Standard atmospheres for conditioning and testing (ISO 291)*

EN ISO 527-1, *Plastics - Determination of tensile properties - Part 1: General principles (ISO 527-1)*

EN ISO 527-3, *Plastics - Determination of tensile properties - Part 3: Test conditions for films and sheets (ISO 527-3)*

EN ISO 4892-1, *Plastics - Methods of exposure to laboratory light sources - Part 1: General guidance (ISO 4892-1)*

EN ISO 4892-2:2013, *Plastics - Methods of exposure to laboratory light sources - Part 2: Xenon-arc lamps (ISO 4892-2:2013)*

EN ISO 4892-3:2016, *Plastics - Methods of exposure to laboratory light sources - Part 3: Fluorescent UV lamps (ISO 4892-3:2016)*

EN ISO 7765-1:2004, *Plastics film and sheeting - Determination of impact resistance by the free-falling dart method - Part 1: Staircase methods (ISO 7765-1:1988)*

ISO 4592, *Plastics — Film and sheeting — Determination of length and width*

ISO 4593, *Plastics — Film and sheeting — Determination of thickness by mechanical scanning*

3 Terms and definitions, and abbreviated terms

3.1 Terms and definitions

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