

STN	Plasty Krycie fólie z termoplastov na používanie v poľnohospodárstve a v záhradníctve	STN EN 13206 64 6017
------------	--	--

Plastics - Thermoplastic covering films for use in agriculture and horticulture

Táto norma obsahuje anglickú verziu európskej normy.
This standard includes the English version of the European Standard.

Táto norma bola oznámená vo Vestníku ÚNMS SR č. 06/17

Obsahuje: EN 13206:2017

Oznámením tejto normy sa ruší
STN EN 13206 (64 6017) z októbra 2001

125007

Úrad pre normalizáciu, metrológiu a skúšobníctvo Slovenskej republiky, 2017
Podľa zákona č. 264/1999 Z. z. o technických požiadavkách na výrobky a o posudzovaní zhody a o zmene a doplnení niektorých zákonov v znení neskorších predpisov sa slovenská technická norma a časti slovenskej technickej normy môžu rozmnožovať alebo rozširovať len so súhlasom slovenského národného normalizačného orgánu.

EUROPEAN STANDARD

EN 13206

NORME EUROPÉENNE

EUROPÄISCHE NORM

January 2017

ICS 65.040.30; 83.140.10

Supersedes EN 13206:2001

English Version

Plastics - Thermoplastic covering films for use in agriculture and horticulture

Plastiques - Films de couverture thermoplastiques
pour utilisation en agriculture et horticulture

Kunststoffe - Thermoplastische Abdeckfolien für den
Einsatz in der Landwirtschaft und im Gartenbau

This European Standard was approved by CEN on 14 November 2016.

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: Avenue Marnix 17, B-1000 Brussels

Contents	Page
European foreword.....	4
1 Scope.....	5
2 Normative references.....	5
3 Terms and definitions.....	6
4 Types and use.....	7
5 Material	8
6 Durability.....	8
7 Requirements.....	9
8 Test methods	12
9 Film acceptance, storage and handling.....	18
10 Designation	18
11 Marking	19
12 Instructions for installation, use of covering films.....	19
13 Instructions for disposal and end-of-life of covering films	19
Annex A (informative) Exposure to other light sources.....	20
A.1 Medium pressure mercury vapour lamps.....	20
A.2 Fluorescent uv lamps.....	22
Annex B (informative) Empirical correlation between durations of covering films exposed to artificial weathering and a natural exposure.....	24
B.1 Exposure to xenon-arc lamps.....	24
B.2 Exposure to medium pressure mercury vapour lamps.....	27
B.3 Exposure to fluorescent uv lamps.....	27
Annex C (normative) Determination of the chlorine content by coulometry	28
C.1 Principle.....	28
C.2 Apparatus and reagents.....	28
C.3 Test procedure	28
C.4 Calculation and expression of the results	30
C.5 Test report.....	30
C.6 Precision.....	31
C.7 Determination of chlorine in the presence of benzotriazole	31
Annex D (normative) Determination of the sulfur content by icp- oes technique	32
D.1 Scope	32

D.2	Instruments and reagents.....	32
D.3	Method of analysis.....	32
D.4	References preparation and calibration	33
D.5	Sample preparation (digestion)	34
D.6	Sulfur measurement	34
D.7	Expression of results	34
D.8	Sulfur determination in case of presence of ni quenchers	34
D.9	Examples of conditions.....	34
Annex E (informative) Alternative method for the determination of chlorine and sulfur contents by x-ray fluorescence.....		
E.1	Principle	36
E.2	Introduction.....	36
E.3	Apparatus	36
E.4	Test procedure.....	36
E.5	Calculation and expression of the result.....	36
E.6	Test report.....	37
Annex F (informative) Alternative methods for the determination of sulfur content by ultraviolet fluorescence method or by coulometry.....		
F.1	Principle	38
F.2	Ultraviolet fluorescence method.....	38
F.3	Coulometry.....	40
Annex G (informative) Guidance for installation, use and disposal of covering films.....		
G.1	Greenhouse covering films.....	43
G.2	Low tunnel covering films.....	49
G.3	Removal instructions	50
Annex H (informative) Industrial standard formats of films.....		
	Bibliography	52

European foreword

This document (EN 13206:2017) has been prepared by Technical Committee CEN/TC 249 “Plastics”, the secretariat of which is held by NBN.

This document supersedes EN 13206:2001.

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 2017, and conflicting national standards shall be withdrawn at the latest by July 2017.

The following technical changes have been made in comparison to EN 13206:2001:

- a minimum thickness of the film is fixed;
- the test methods have been updated as appropriate;
- this revision specifies also test methods for the determination of the chlorine and sulfur contents of the films subjected to use and defines guidelines for installation, use and disposal;
- the classification for the durability of the covering films is extended to a further class.

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.

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.

1 Scope

This European Standard specifies the requirements related to dimensional, mechanical, optical and thermal characteristics of thermoplastic films used for covering permanent or temporary greenhouses and walking tunnels and low tunnels used for forcing and semi-forcing vegetable, fruit and flower crops.

Lay-flat perforated cover films are also in the scope of this European Standard.

It specifies a classification for the durability of covering films and the test methods referred to in this standard.

This European Standard specifies also test methods for the determination of the chlorine and sulfur contents of films subjected to use.

This European Standard is applicable to thermoplastic covering films used in agriculture and horticulture in Europe, in the thickness range 20 µm up to more than 250 µm, based on polyethylene and/or ethylene copolymers materials, of the following types: non-thermal films, thermal clear films and thermal diffusing films.

This European Standard also defines guidance for installation, use and disposal of covering films. It defines the conventional expected lifetime, as well as rules that allow evaluating the remaining use potential in the event of a failure before the normal end-of-use date.

NOTE These rules allow estimating the residual value of the films. These provisions only apply to the film itself and the damage it has undergone. Any other problem falls within the scope of professional practices and the general terms and conditions of sale.

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 10244-2, *Steel wire and wire products - Non-ferrous metallic coatings on steel wire - Part 2: Zinc or zinc alloy coatings*

EN 13031-1, *Greenhouses - Design and construction - Part 1: Commercial production greenhouses*

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

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 4892-2:2013, *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)*

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 4591, *Plastics — Film and sheeting — Determination of average thickness of a sample, and average thickness and yield of a roll, by gravimetric techniques (gravimetric thickness)*

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

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

ASTM D 1003-13, *Standard Test Method for Haze and Luminous Transmittance of Transparent Plastics*

koniec náhľadu – text ďalej pokračuje v platenej verzii STN