



NSAI
Standards

Irish Standard
I.S. EN 13655:2018

Plastics - Thermoplastic mulch films recoverable after use, for use in agriculture and horticulture

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I.S. EN 13655:2018

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National Foreword

I.S. EN 13655:2018 is the adopted Irish version of the European Document EN 13655:2018, Plastics - Thermoplastic mulch films recoverable after use, for use in agriculture and horticulture

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EUROPEAN STANDARD

EN 13655

NORME EUROPÉENNE

EUROPÄISCHE NORM

February 2018

ICS 83.140.10

Supersedes EN 13655:2002

English Version

Plastics - Thermoplastic mulch films recoverable after use, for use in agriculture and horticulture

Plastiques - Films de paillage thermoplastiques
récupérables après usage, pour utilisation en
agriculture et horticulture

Kunststoffe - Nach Gebrauch abnehmbare
thermoplastische Mulchfolien für den Einsatz in
Landwirtschaft und im Gartenbau

This European Standard was approved by CEN on 10 December 2017.

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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.

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Contents	Page
European foreword.....	4
1 Scope	5
2 Normative references	5
3 Terms and definitions	6
4 Types and use	7
5 Materials.....	7
6 Durability	7
7 Requirements	8
7.1 General requirements	8
7.2 Requirement for appearance.....	11
8 Test methods.....	12
8.1 Determination of thickness	12
8.2 Determination of width.....	12
8.3 Determination of film length	12
8.4 Determination of tensile characteristics	12
8.5 Determination of impact resistance.....	13
8.5.1 General.....	13
8.5.2 Flat area	13
8.5.3 Fold area	13
8.6 Determination of the total luminous transmittance (transparent films).....	14
8.7 Determination of solar radiation in PAR and NIR region	14
8.7.1 Principle	14
8.7.2 Apparatus.....	14
8.7.3 Procedure.....	14
8.7.4 Expression of results.....	15
8.8 Solar reflectance	15
8.9 Determination of the relative light transmission.....	15
8.10 Resistance to artificial weathering.....	15
8.10.1 Principle	15
8.10.2 Exposure to xenon-arc lamps	15
8.10.3 Procedure	16
8.10.4 Calculation and expression of results.....	16
9 Roll acceptance, storage and handling	16
9.1 Delivery checking.....	16
9.2 Storage and handling of rolls	16
10 Designation.....	17
11 Marking.....	17
11.1 Marking of the film	17
11.2 Marking on the packaging or label	17
12 Functions and factors of degradability of mulch films	18

13	Conditions for installation and use of mulch films	18
14	Removal instructions and end of life	18
	Annex A (informative) Exposure to other light sources	19
A.1	Medium pressure mercury vapour lamps	19
A.1.1	Durability classification	19
A.1.2	Exposure to medium pressure mercury vapour lamps	19
A.1.3	Procedure	21
A.1.4	Calculation and expression of results	21
A.2	Exposure to fluorescent UV lamps	21
A.2.1	Durability classification	21
A.2.2	Exposure to fluorescent UV lamps	21
A.2.3	Procedure	22
A.2.4	Calculation and expression of results	22
	Annex B (informative) Numerical correlation between durations of mulching films exposed to artificial weathering and a natural exposure	23
B.1	Exposure to xenon-arc lamps	23
B.2	Exposure to medium pressure mercury vapour lamps	24
B.3	Exposure to fluorescent UV lamps	24
	Annex C (normative) Determination of solar reflectance	25
C.1	Principle	25
C.2	Terms and definitions	25
C.3	Apparatus	25
C.3.1	General	25
C.3.2	Test specimens	26
C.3.3	Procedure	26
C.3.4	Calculation of the solar reflectance R_s	26
	Annex D (normative) Determination of the relative light transmission	28
D.1	Principle	28
D.2	Apparatus	28
D.3	Procedure	28
D.4	Expression of results	28
	Annex E (informative) Guidance for conditions for installation, use and removal of mulch films	29
E.1	Main functions of mulch films	29
E.2	Factors for degradability	29
E.3	Conditions for installation, use and removal	29
E.3.1	Installation instructions	29
E.3.2	Durability of mulching films	30
E.4	Removal instructions	30
	Bibliography	31

EN 13655:2018 (E)

European foreword

This document (EN 13655:2018) 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 August 2018 and conflicting national standards shall be withdrawn at the latest by August 2018.

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

This document supersedes EN 13655:2002.

The following technical changes have been made in comparison to EN 13655:2002:

- the Scope has been extensively specified and enlarged to installation, use and removal conditions of mulch films;
- the standard is only applicable to thermoplastic mulch films recoverable after use;
- modification of the minimum nominal thickness of the mulch films which conform to this standard, 20 µm instead of 10 µm;
- the types of mulch films have been redefined;
- the Table 2-Classification according to artificial weathering, has been modified;
- the paragraphs for requirements, test methods, acceptance, storage and handling have been drafted in a new frame;
- the paragraphs on functions and factors of degradability, instructions disposal of mulch films and end-of-life, have been added.

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 document specifies the requirements related to dimensional, mechanical, optical and thermal characteristics of thermoplastic films for mulching applications in agriculture and horticulture.

These mulch films are intended to be removed after use and not incorporated in the soil.

These mulch films are not intended to be used for soil disinfection by fumigation. Films for this application are in the scope of EN 17098-1[1].

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

This document is applicable to thermoplastic mulch films, used for agriculture and horticulture in Europe, based on polyethylene and/or ethylene copolymers, of the following types:

- transparent films;
- black films;
- reflective films (e.g. white films, black/white films and black/silver films);
- films of other colour(s) for weed control (e.g. green, brown).

This document also defines installation, use and removal conditions of mulch films.

NOTE Mulch films are considered as highly contaminated by soil and vegetal residues: the observed rates (or levels) of contamination of mulch films can vary from 70 % to 90 %. Therefore the film thickness is a key factor on the rate of contamination, the thinnest films (e.g. less than 25 µm) will be the mostly contaminated, difficult, expensive to remove, recover and recycle.

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

EN ISO 527-3:1995, *Plastics - Determination of tensile properties - Part 3: Test conditions for films and sheets (ISO 527-3:1995)*

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

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*

ISO 9845-1, *Solar energy - Reference solar spectral irradiance at the ground at different receiving conditions - Part 1: Direct normal and hemispherical solar irradiance for air mass 1,5*

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

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