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English Version

**Plastics - Biodegradable thermoplastic mulch films for use
in agriculture and horticulture - Guide for the
quantification of alteration of films**

Plastiques - Films de paillage thermoplastiques
biodégradables pour utilisation en agriculture et
horticulture - Guide pour la quantification de
l'altération des films

Kunststoffe - Biologisch abbaubare thermoplastische
Mulchfolien für den Einsatz in Landwirtschaft und
Gartenbau - Leitfaden für die Quantifizierung der
Veränderung von Folien

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European foreword

This document (CEN/TR 17219:2018) has been prepared by Technical Committee CEN/TC 249 “Plastics”, the secretariat of which is held by NBN.

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Introduction

Biodegradable mulch films have become a common practice in agriculture. Their characteristics in terms of environmental impact (biodegradation in soil and ecotoxicity) have been indicated in EN 17033, *Biodegradable mulch films for use in agriculture and horticulture – Requirements and test methods*.

In order to complete the characterization of these materials, this technical report gives information on a procedure for sampling and measuring the occurrence of a damage on the biodegradable mulch film when in use in the field [1].

It is recommended to collect the agronomic and weather information of the mulched area. The information collected does not alter the procedure described.

This document may be used to assess the surface integrity of the biodegradable thermoplastic mulch film during its service life.

1 Scope

This document gives guidance for the quantification of alteration of biodegradable thermoplastic mulch films for use in agriculture and horticulture.

It can be used for biodegradable thermoplastic mulch films in conformity with EN 17033.

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 17033, *Plastics — Biodegradable thermoplastic mulch films for use in agriculture and horticulture — Requirements and test methods*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in EN 17033 and the following apply.

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

- IEC Electropedia: available at <http://www.electropedia.org/>
- ISO Online browsing platform: available at <http://www.iso.org/obp>

3.1 alteration

alteration of the film in anyway either confined to a well-defined and attributed to a specific cause or distributed on the whole surface of the film

Note 1 to entry: Alterations not considered due to the characteristics of the material, are all those injuries caused by animals or particularly violent weather events (storms, hail, wind, etc.) or mechanical damage accidentally caused by objects, equipment improperly used or man-made (trampling, damages done by tools, other similar).

3.2 damage

alteration that affects more than 10 % of the surface of the sampled areas of a mulch film

3.3 row

succession of plants placed at a uniform and defined distance

4 Principle

The alteration incurred by a biodegradable mulching film is represented by the interruption of the continuity of the surface and the consequent exposure of the underlying soil.

Applying the provisions of agrarian evaluation [2], the evaluation of the alteration of a biodegradable mulching film is comparable to the valuation of the damage caused by hail, or by pathogenic foliaceous agents. Therefore, it is possible to operate by performing visual examinations and photographic surveys by using the analytical procedure described in this document.

The quantification of the alteration is performed through visual examinations and photographic surveys if necessary. The number of zones to be sampled might be determined following national regulations, if any [3].