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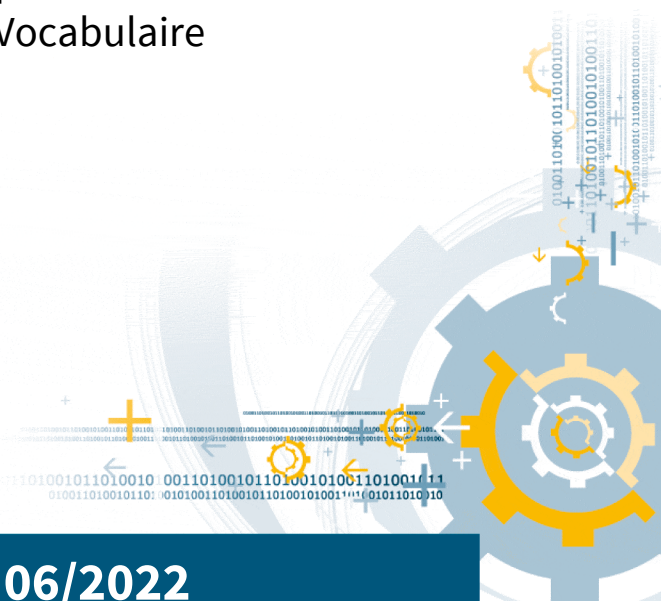
ILNAS-EN 17615:2022

Plastics - Environmental Aspects - Vocabulary

Kunststoffe - Umweltaspekte - Begriffe

Plastiques - Aspects environnementaux -
Vocabulaire

06/2022



National Foreword

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EUROPEAN STANDARD ^{ILNAS-EN 17615:2022} **EN 17615**
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English Version

Plastics - Environmental Aspects - Vocabulary

Plastiques - Aspects environnementaux - Vocabulaire

Kunststoffe - Umweltaspekte - Vokabular

This European Standard was approved by CEN on 27 April 2022.

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European foreword

This document (EN 17615:2022) 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of an identical text or by endorsement, at the latest by December 2022, and conflicting national standards shall be withdrawn at the latest by December 2022.

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Introduction

The need for harmonized terms and definitions in the field of plastics relating to environmental aspects is growing. This document intends to give a common set of terms and definitions and thus strives to facilitate the communication and development of standards in this area.

The term “bioplastic” is not defined in this text, since EN 17228 states the following:

The terms “biopolymers” and “bioplastics” are commonly used to identify polymers and plastics that are either bio-based, biodegradable, or feature both properties. While these definitions are quite widespread and used by industry, it is recognized that they are susceptible to misunderstanding and thus inappropriate for standardization purposes.

The terms oxo-degradable and oxo-biodegradable are generally used to indicate plastic products made of conventional plastics (mostly polyolefins) supplemented in the transformation phase with catalysts that accelerate oxidation of the polymer. There are no European Standards that clarify how the potential of oxo-biodegradation can be measured and classified. However, the terms “oxo-degradable” and “oxo-biodegradable” have been widely used, sometimes arousing controversy. The use for market purposes, the lack of international standards, and the disputes raised over the marketing of these products are the reasons for not defining the terms in this document, pending the elaboration of specific standards. It has to be mentioned that the global market of “oxo-biodegradable” materials is deeply fragmented where, for example, countries in the EU have banned these materials, while in countries such as the UEA, Pakistan, Iran, Morocco, Yemen and DR Congo it is forbidden to use certain products like bags and plastic packaging if they are not oxo-biodegradable.

NOTE A definition of oxo-degradable plastic is present in DIRECTIVE (EU) 2019/904, Art. 3, 3.

General terms have the addition “of plastics”, e.g. “recycling of plastics” in this document for clarification. However, in practice they are often used without this addition.

1 Scope

This document specifies terms and definitions in the field of plastics related to environmental aspects and provides a common vocabulary for:

- bio-based plastics;
- biodegradability;
- carbon and environmental footprint;
- circular economy;
- design;
- plastics in natural environments;
- reuse and recycling;
- waste management.

This document aims to provide a comprehensive glossary which uses the applicable definitions providing when appropriate additional notes to make these definitions understandable without reference to other documents. Definitions are as far as possible adopted from existing standards but when the original intention or definition is unclear additional context or definitions are provided.

2 Normative references

There are no normative references in this document.

3 Terms and definitions

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

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

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

3.1

accelerated-ageing test

short-term test designed to reach more rapidly the natural ageing state for a material, following an identical mechanism of the physico-chemical processes that occur during longer-term service conditions

3.2

activated sludge

biomass produced in the aerobic treatment of waste water by the growth of bacteria and other microorganisms in the presence of dissolved oxygen

[SOURCE: ISO 14851:2019, 3.2]

3.3

aerobic biodegradation

biodegradation under aerobic conditions

[SOURCE: CEN/TR 15351:2006, c) 2]

3.4

additives

substances which are used to process plastics or to modify end use properties of plastics

Note 1 to entry: Substances are normally included in carrier matrix.

Note 2 to entry: Impact modifiers are rubbery type of additives added to plastics to improve toughness by absorbing or dissipating the energy of impact.

Note 3 to entry: Rheology modifiers, also referred to as thickeners are additives that make a melt to become flowable and easily poured when a force is applied.

Note 4 to entry: Plasticizers are additives that are mixed with polymers to make them softer and more flexible.

3.5

ageing

time-dependent irreversible chemical and physical processes in a plastic material under the influence of one or more environmental factors leading to undesirable change in properties

EXAMPLES Extraction and evaporation.

3.6

agglomerate

larger particles formed by joining or binding together of smaller particles whose original identity can still be visible in the final form

Note 1 to entry: Agglomerates can be supplied for further processing in the form of free-flowing material.

3.7

amorphous polymers

polymers that do not form a crystalline structure but rather form an irregular arrangement and have no long-range order

3.8

anaerobic biodegradation

biodegradation under anaerobic conditions

[SOURCE: CEN/TR 15351:2006, c) 3]

3.9

anaerobic digestion

process of controlled decomposition of biodegradable materials under managed conditions where free oxygen is absent, at temperatures suitable for naturally occurring mesophilic or thermophilic anaerobic and facultative bacteria species, that convert the inputs to a methane rich biogas and digestate

Note 1 to entry: In a second phase, the digestate is typically stabilized by means of a composting (aerobic) process.

[SOURCE: ISO 18606:2013, 3.10]