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## Plastics — Industrial compostable plastic drinking straws

*Plastiques — Pailles en plastique compostables en compostage  
industriel*



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## Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular, the different approval criteria needed for the different types of ISO documents should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see [www.iso.org/directives](http://www.iso.org/directives)).

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights. Details of any patent rights identified during the development of the document will be in the Introduction and/or on the ISO list of patent declarations received (see [www.iso.org/patents](http://www.iso.org/patents)).

Any trade name used in this document is information given for the convenience of users and does not constitute an endorsement.

For an explanation of the voluntary nature of standards, the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the World Trade Organization (WTO) principles in the Technical Barriers to Trade (TBT), see [www.iso.org/iso/foreword.html](http://www.iso.org/iso/foreword.html).

This document was prepared by Technical Committee ISO/TC 61, *Plastics*, Subcommittee SC 14, *Environmental aspects*.

Any feedback or questions on this document should be directed to the user's national standards body. A complete listing of these bodies can be found at [www.iso.org/members.html](http://www.iso.org/members.html).

## Introduction

Plastic drinking straws are used worldwide for many years. This caused several environmental problems, such as terrestrial pollution, contamination of soil and water/marine environment pollution. These pose a severe risk to ecosystems, biodiversity and human health. Recently, many countries, regions and cities have enacted legislation to ban or severely reduce the use of plastic drinking straws to help tackle these issues.

This document does not aim to bypass this legislation, but aims to specifically address the following aspects where plastic drinking straws suitable for industrial composting can be used:

- a) offering methods for testing compostability, followed by demonstrating the impact of industrial compostable drinking straws on the ecological environment;
- b) providing a reference for the evaluation of industrial compostable plastic straws.

Development of this document is expected to effectively improve the quality management of industrial compostable drinking straws in countries, regions, and cities where industrial composting is available.



# Plastics — Industrial compostable plastic drinking straws

## 1 Scope

This document specifies the terms and definitions, basic requirements, technical requirements, test methods, test regulations, and packaging of industrial compostable plastic drinking straws.

## 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.

ISO 291, *Plastics — Standard atmospheres for conditioning and testing*

ISO 2859-1, *Sampling procedures for inspection by attributes — Part 1: Sampling schemes indexed by acceptance quality limit (AQL) for lot-by-lot inspection*

ISO 17088, *Plastics — Organic recycling — Specifications for compostable plastics*

ISO 18188:2016, *Specification of polypropylene drinking straws*

## 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:

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

### 3.1

#### **compost**

organic soil conditioner obtained by biodegradation of a mixture consisting principally of vegetable residues, occasionally with other organic material and having a limited mineral content

[SOURCE: ISO 17088:2021, 3.1]

### 3.2

#### **compostable plastic**

plastic that undergoes degradation by biological processes during composting to yield CO<sub>2</sub>, water, inorganic compounds and biomass at a rate consistent with other known compostable materials and leave no visible, distinguishable or toxic residue

Note 1 to entry: “Hazardous” is used synonymously to toxic.

[SOURCE: ISO 17088:2021, 3.2]

### 3.3

#### **composting**

aerobic process designed to produce *compost* (3.1) starting from biodegradable waste

Note 1 to entry: Composting is classified into industrial composting, home composting and worm composting.

[SOURCE: ISO 17088:2021, 3.3]