

Environmental Aspects of Plastics



TECHNICAL COMMITTEES ON ENVIRONMENTAL ASPECTS OF PLASTICS STANDARDIZATION

- International level -

ISO/TC 61/SC 14: Plastics – Environmental Aspects

Scope

ISO/TC 61/SC 14 deals with standardization activities in the field of plastics relating to environmental and sustainability aspects. The focus is on, but not limited to biobased plastics, biodegradability, environmental footprint including carbon footprint, resource efficiency including circular economy, characterization of plastics leaked into the environment including microplastics, waste management including organic, mechanical and chemical recycling.

ISO/TC 122/SC 4 – Packaging – Packaging and the Environment

Scope

ISO/TC 122/SC 4 aims to develop standards in order to harmonize environmental aspects on packaging and packaging systems throughout the life cycle, including but not limited to: terminology and general requirements, optimization and source reduction, reuse, recycling, other recovery, recycled content, as well as identification and design.

- European level -

CEN/TC 249/WG 9: Plastics – Bio-based and Biodegradable Plastics

Scope

CEN/TC 249/WG 9 develops definition of terms, vocabulary and identification means regarding degradable plastics and degradability of plastics. Standardisation of test methods for the characterisation of the degradability of plastics in various environments. Standardisation of specifications for degradable plastics.

CEN/TC 249/WG 24: Plastics – Environmental Aspects

Scope

CEN/TC 249/WG 24 is responsible of strategic aspects and coordination of all standardization activities in the field of plastics relating to environmental aspects. The focus is on, but not limited to biobased plastics, biodegradability, carbon and environmental footprint, circular economy and resource efficiency, microplastics and plastics in the environment, recycling and waste management.

MAIN STANDARDS ON ENVIRONMENTAL ASPECTS OF PLASTICS

ISO/TC 61/SC 14: Plastics – Environmental Aspects

ISO 17422:2018	Plastics — Environmental aspects — General guidelines for their inclusion in standards
ISO/TR 21960:2020	Plastics — Environmental aspects — State of knowledge and methodologies
ISO 24187:2023	Principles for the analysis of microplastics present in the environment
ISO 5412:2022	Plastics — Industrial compostable plastic shopping bags
ISO 5424:2022	Plastics — Industrial compostable plastic drinking straws
ISO 15270:2008	Plastics — Guidelines for the recovery and recycling of plastics waste
ISO 17088:2021	Plastics — Organic recycling — Specifications for compostable plastics
ISO 22526 series	Plastics — Carbon and environmental footprint of biobased plastics <ul style="list-style-type: none"> • Part 1: General principles • Part 2: Material carbon footprint, amount (mass) of CO₂ removed from the air and incorporated into polymer molecule • Part 3: Process carbon footprint, requirements and guidelines for quantification • Part 4: Environmental (total) footprint (Life cycle assessment)
ISO 5425:2023	Specifications for use of poly(lactic acid) based filament in additive manufacturing applications
ISO 5430:2023	Plastics — Ecotoxicity testing scheme for soluble decomposition intermediates from biodegradable plastic materials and products used in the marine environment — Test methods and requirements
ISO 5677:2023	Testing and characterization of mechanically recycled polypropylene (PP) and polyethylene (PE) for intended use in different plastics processing techniques
ISO 16620 series	Biobased content <ul style="list-style-type: none"> • Part 1: General principles • Part 2: Determination of biobased carbon content • Part 3: Determination of biobased synthetic polymer content • Part 4: Determination of biobased mass content • Part 5: Declaration of biobased carbon content, biobased synthetic polymer content and biobased mass content
ISO 23517:2021	Plastics — Soil biodegradable materials for mulch films for use in agriculture and horticulture — Requirements and test methods regarding biodegradation, ecotoxicity and control of constituents
...	+ various standards related to (testing of) biodegradation, general degradation and disintegration of plastic materials in certain environments under certain conditions

ISO/TC 122/SC 4 – Packaging – Packaging and the Environment

ISO 18604:2013	Packaging and the environment – Material recycling
ISO 18806:2013	Packaging and the environment – Organic recycling

CEN/TC 249/WG 9: Plastics – Bio-based and Biodegradable Plastics

CEN/TS 17627:2021	Plastics – Recycled plastics – Determination of solid contaminants content
EN 14995:2006	Plastics – Evaluation of compostability – Test scheme and specifications

CEN/TC 249/WG 24: Plastics – Environmental Aspects

EN 17615:2022	Plastics - Environmental Aspects - Vocabulary
CEN ISO/TR 21960:2020	Plastics - Environmental aspects - State of knowledge and methodologies (ISO/TR 21960:2020)