AS 5810—2010

Australian Standard®

Biodegradable plastics—Biodegradable plastics suitable for home composting

This Australian Standard® was prepared by Committee EV-017, Degradability of Plastics. It was approved on behalf of the Council of Standards Australia on 6 July 2010.
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The following are represented on Committee EV-017:

- Australasian Bioplastics Association
- CSIRO
- National Association of Testing Authorities Australia
- National Environment Protection and Heritage Council
- NSW Advisory Council on Recreational Fishing
- Planet Ark foundation
- Plastics and Chemicals Industries Association
- Queensland University of Technology
- Waste Management Association of Australia

This Standard was issued in draft form for comment as DR AS 5810.

Standards Australia wishes to acknowledge the participation of the expert individuals that contributed to the development of this Standard through their representation on the Committee and through the public comment period.

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PREFACE

This Standard was prepared by the Standards Australia Committee EV-017, Degradability of Plastics, to assist authorities that regulate polymeric materials entering into the Australian market, and ensure product quality with respect to biodegradability and toxicity claims.

This Standard forms part of a series of test methods and performance standards to enable certification bodies to validate and, if appropriate, support claims.

The Environment Protection and Heritage Council agreed to initiate the development of Australian Standards on degradation of plastics for disposal environments in Australia. The objective being to reduce accumulation of polymeric waste materials in the environment by composting, and other aerobic and anaerobic microbial degradation.

This Standard applies the principles of AS 4736—2006, *Biodegradable plastics—Biodegradable plastics suitable for composting and other microbial treatment*, to determine the suitability of biodegradable plastics for home composting.

In the preparation of this Standard, the Committee also referred to the following:

(a) OK Compost HOME: Initial acceptance tests, Program OK 2 Home compostability of products, AIB-VINCOTTE International, Edition C.

(b) AIB-VINCOTTE International, Edition C.

(c) ISO 17088:2008, *Specifications for compostable plastics*.

Test methods and limit values for compost may be introduced into future revisions of this Standard as more experience is gained.

The term ‘informative’ has been used in this Standard to define the application of the appendix to which it applies. An ‘informative’ appendix is only for information and guidance.

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1 SCOPE

This Standard specifies requirements and procedures to determine whether a plastic material is biodegradable in home composting conditions and provides the basis to allow labelling of materials or products made from plastics as 'home compostable', for use in home composting systems.

This Standard stipulates pass/fail criteria addressing biodegradability, disintegration during biological treatment, effect on the biological treatment process and effect on the quality of the resulting home compost.

Home composting systems vary considerably in their design, construction and operation; hence their performance also varies considerably compared to commercial composting facilities. Consequently, this Standard, in comparison to AS 4736, uses lower temperatures in test environments and a longer test duration, to account for such variations in home composting performance.

2 REFERENCED DOCUMENTS*

The following documents are referred to in this Standard:

AS	
4454	Composts, soil conditioners and mulches
4736	Biodegradable plastics—Biodegradable plastics suitable for composting and other microbial treatment
AS ISO	
14852	Plastic materials—Determination of the ultimate aerobic biodegradability in an aqueous medium—Method by analysis of evolved carbon dioxide
14855	Plastic materials—Determination of the ultimate aerobic biodegradability and disintegration under controlled composting conditions—Method by analysis of evolved carbon dioxide
ISO	
10634	Water quality—Guidance for the preparation and treatment of poorly water-soluble organic compounds for the subsequent evaluation of their biodegradability in an aqueous medium
14851	Determination of the ultimate aerobic biodegradability of plastic materials in an aqueous medium—Method by measuring the oxygen demand in a closed respirometer
20200	Plastics—Determination of the degree of disintegration of plastic materials under simulated composting conditions in a laboratory-scale test

* For additional information see documents listed in Appendix B.

