

BUREAU OF INDIAN STANDARDS
DRAFT FOR COMMENTS ONLY

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Draft Indian Standard

**PLASTICS — SOIL BIODEGRADABLE MATERIALS FOR MULCH FILMS FOR
USE IN AGRICULTURE AND HORTICULTURE — REQUIREMENTS AND TEST
METHODS REGARDING BIODEGRADATION, ECOTOXICITY AND CONTROL
OF CONSTITUENTS**

(ICS 83.140.10; 65.020.20)

Plastics Sectional Committee,
PCD 12

Last date for receipt of comment is
13 April 2024

NATIONAL FOREWORD

(Formal clauses will be added later)

The text of ISO Standard has been approved as suitable for publication as an Indian Standard without deviations. Certain conventions are, however, not identical to those used in Indian Standards. Attention is particularly drawn to the following:

- a) Wherever the words 'International Standard' appear referring to this standard, they should be read as 'Indian Standard'.
- b) Comma (,) has been used as a decimal marker while in Indian Standards, the current practice is to use a point (.) as the decimal marker.

In this adopted standard, reference appears to certain International Standard for which Indian Standard also exist. The corresponding Indian Standard, which is to be substituted in its place, is listed below along with its degree of equivalence for the editions indicated.

<i>International Standard</i>	<i>Corresponding Indian Standard</i>	<i>Degree of Equivalence</i>
ISO 17556 Plastics — Determination of the ultimate aerobic biodegradability of plastic materials in soil by measuring the oxygen demand in a respirometer or the amount of carbon dioxide evolved	IS/ISO 17556 : 2019 Plastics — Determination of the Ultimate Aerobic Biodegradability of Plastic Materials in Soil by Measuring the Oxygen Demand in a Respirometer or the Amount of Carbon Dioxide Evolved (<i>second revision</i>)	Identical

The technical committee has reviewed the provisions of the following International Standards/other publications referred in this adopted standard and has decided that they are acceptable for use in conjunction with this standard:

<i>International Standard/other publications</i>	<i>Title</i>
ISO 10390	Soil quality — Determination of pH
ISO 11268-1	Soil quality — Effects of pollutants on earthworms — Part 1: Determination of acute toxicity to <i>Eisenia fetida</i> / <i>Eisenia andrei</i>
ISO 11268-2	Soil quality — Effects of pollutants on earthworms — Part 2: Determination of effects on reproduction of <i>Eisenia fetida</i> / <i>Eisenia andrei</i>
ISO 11269-2	Soil quality – Determination of the effects of pollutants on soil flora — Part 2: Effects of contaminated soil on the emergence and early growth of higher plants
ISO 11274	Soil quality –Determination of the water-retention characteristic — Laboratory methods
ISO 15685	Soil quality — Determination of potential nitrification and inhibition of nitrification — Rapid test by ammonium oxidation
ISO 17556	Plastics — Determination of the ultimate aerobic biodegradability of plastic materials in soil by measuring the oxygen demand in a respirometer or the amount of carbon dioxide evolved
EN 14582	Characterization of waste — Halogen and sulfur content — Oxygen combustion in closed systems and determination methods
OECD. (2006), Test No. 208	Terrestrial Plant Test: Seedling Emergence and Seedling Growth Test, OECD Guidelines for the Testing of Chemicals, Section 2

The standard also makes a reference to the packing and marking. Details of which are given in National Annex A.

For the purpose of deciding whether a particular requirement of this standard is complied with the final value, observed or calculated, expressing the result of a test or analysis shall be rounded off in accordance with IS 2 : 2022 ‘Rules for rounding off numerical values (*second revision*)’. The number of significant places retained in the rounded off value should be the same as that of the specified value in this standard.

NOTE — The technical content of this document has not been enclosed as this is identical with the corresponding ISO Standard. For details, please refer to ISO 23517 : 2021 or kindly contact:

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NATIONAL ANNEX A
(National Foreword)

A-1 PACKING AND MARKING

A-1.1 Packing

The material/film shall be packed as agreed to between purchaser and supplier.

A-1.2 Marking

A-1.2.1 Each unit package shall be clearly marked with the following:

- i) Name of the material;
- ii) Name of the manufacturer and trade mark; if any.
- iii) Month and year of manufacture of the material;
- iv) Batch number/ Lot number; and
- v) Any other Statutory requirement.

A-1.2.2 *BIS Certification Marking*

The product(s) conforming to the requirements of this standard may be certified as per the conformity assessment schemes under the provisions of the *Bureau of Indian Standards Act, 2016* and the Rules and Regulations framed thereunder, and the products may be marked with the Standard Mark.