INTERNATIONAL STANDARD

ISO 1874-2

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AMENDMENT 1
2010-11-15

Plastics — Polyamide (PA) moulding and extrusion materials —

Part 2: Preparation of test specimens and determination of properties

AMENDMENT 1 Laser sintering of specimens

Plastiques — Matériaux polyamides (PA) pour moulage et extrusion —
Partie 2: Préparation des éprouvettes et détermination des propriétés

AMENDEMENT 1: Frittage laser des éprouvettes

Reference number
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Foreword

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Amendment 1 to ISO 1874-2:2006 was prepared by Technical Committee ISO/TC 61, *Plastics*, Subcommittee SC 9, *Thermoplastic materials*.

Plastics — Polyamide (PA) moulding and extrusion materials —

Part 2:
Preparation of test specimens and determination of properties

AMENDMENT 1: Laser sintering of specimens

Page 2, Clause 2

After ISO 15512, add the following normative reference:

ISO 27547-1, *Plastics — Preparation of test specimens of thermoplastic materials using mouldless technologies — Part 1: General principles, and laser sintering of test specimens*

Page 3, Subclause 3.2

Replace the first paragraph by the following text:

For the acquisition and presentation of comparable data, injection-moulded specimens are used so that valid comparisons between materials can be made. These data represent the most basic approach to the designation of the properties of materials.

Injection-moulded specimens shall be prepared in accordance with ISO 294-1, using the conditions specified in Table 1. Such specimens shall be prepared by injection moulding from dry granules. It is essential that the specimens are always prepared by the same procedure using the same processing conditions. The material shall be kept in sealed, moisture-proof containers until it is required for use.

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Below Table 1, add the following new subclause:

3.3 Laser sintering

Although injection-moulded specimens are the only ones to be used to measure designatory properties, it is sometimes useful to prepare specimens using the same techniques as are used in parts manufacture. Different preparation techniques can lead to significantly different properties, and these properties can more closely represent the properties to be expected in the manufactured part.

For specimen preparation using laser sintering, see Annex A.

After page 7

Add the following annex:

Annex A
(normative)

Specimen preparation using laser sintering

Before starting the laser-sintering process, condition the powder for at least 16 h at 23 °C and refer to Subclause 3.1 of ISO 1874-2 regarding the moisture content of the laser-sintering powder.

Specimens produced by laser sintering shall be prepared in accordance with ISO 27547-1, using the temperatures given in Table A.1 and the following sintering conditions:

Layer thickness:	150 µm
Laser power used when producing the contour:	15 W
Laser power used when hatching:	20 W
Laser beam travel speed when producing the contour:	700 mm/s
Laser beam travel speed when hatching:	1 100 mm/s

Table A.1 — Temperatures for the laser sintering of test specimens from different materials

Material	**Minimum polymer temperature** (at beginning of laser sintering) °C	**Temperature of specimen-preparation chamber** °C
PA6	218	120
PA612	212	120
PA1012	190	110
PA11	188	120
PA12	178	110
PEBA	135	110

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